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WINTER USE PLANS
FINAL ENVIRONMENTAL IMPACT STATEMENT
VOLUME III
PART I

for the
Yellowstone and
Grand Teton National Parks
and
John D. Rockefeller, Jr.,
Memorial Parkway

U.S. Department of the Interior
National Park Service

2001-008745/NF C

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I

INTRODUCTION TO VOLUME III

Volume III includes public comments and corresponding NPS responses and is separated into three parts. Part I includes representative government, cooperator, organization, and individual comments and responses. Part II includes form letter comments and responses. The NPS responded directly to all comments in the letters found in Parts I and II. Part III is a summary of comments and responses by subject category. The comments in Part III differ markedly from those in Parts I and III in that they are a summary of the 500,000 comments received on the DEIS. Because of the voluminous nature of the DEIS comments, many of the comments were categorized by subject and then summarized. Accordingly, the responses included in Part III are summary responses. Where possible, the NPS included the actual wording of the comment in the summary comment. Part III is divided into two sections, one that includes impact topics and the other that relates to the NEPA process.

Impact Topics

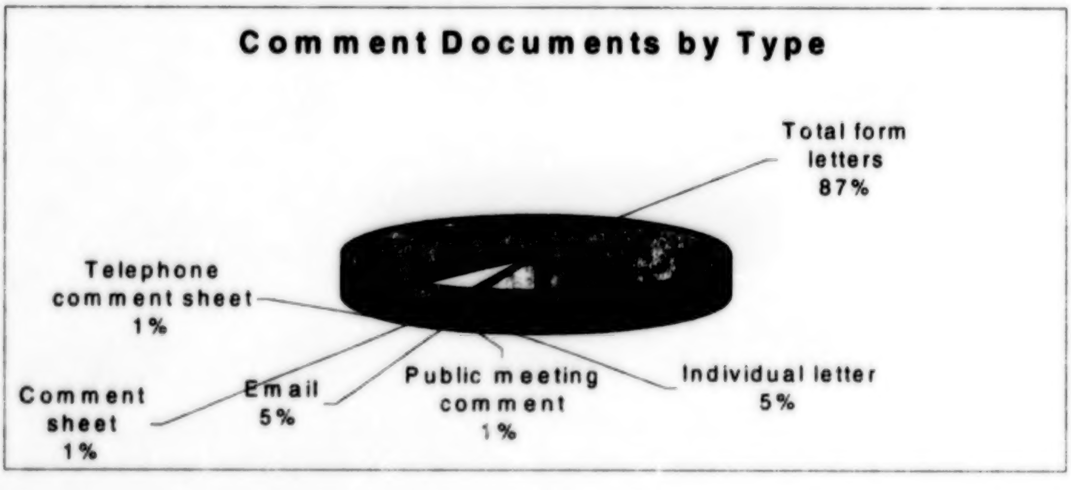
- Adjacent Lands
- Air Quality
- Bison and Other Ungulates
- Cultural Resources
- Geothermal Habitats
- Natural Quiet
- Natural Resources
- Public Health
- Safety
- Socioeconomics
- Species of Special Concern
- Threatened and Endangered Species
- Vegetation
- Visitor Access and Circulation
- Visitor Experience
- Water and Aquatic Resources
- Wildlife

NEPA Process-General

- Alternative Features
- General Expressions of Concern
- Impact Topics Dismissed
- NEPA Process
- Purpose and Need

SUMMARY OF PUBLIC COMMENT ON THE DEIS

This is a summary of the public comments received for the Winter Use Plans/Draft Environmental Impact Statement (DEIS) for the Yellowstone and Grand Teton National Parks and John D. Rockefeller, Jr., Memorial Parkway. The National Park Service (NPS) received comments from across the United States, Canada, and as far away as Germany, Saudi Arabia, and Japan. Most comments came from Rocky Mountain and Northwest States.

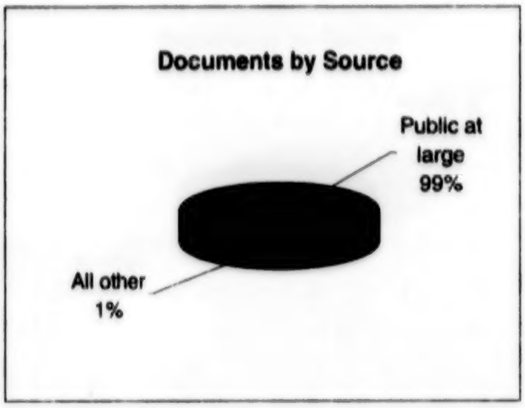


II

The NPS received about 46,500 documents commenting on the DEIS – 6,300 unique documents and 40,200 form documents.

The unique documents contained over 19,700 comments. Most documents (87%) were form documents from individuals. The remaining documents were from telephone calls, NPS comment sheets, e-mails, and public meeting transcriptions.

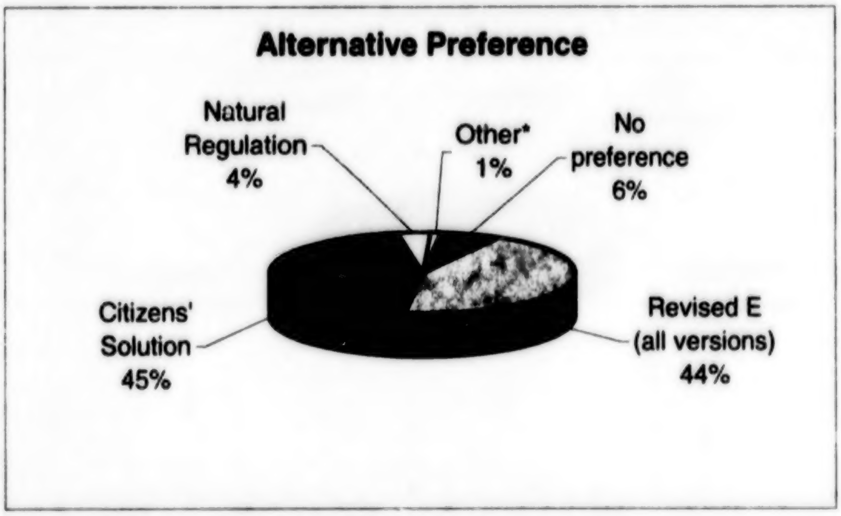
Commentors included businesses, private and non-profit organizations, local state, tribal, and federal government agencies, and the public-at-large, which constituted 99% of the total commentors.



Five new alternatives were submitted by non-profit organizations or government agencies outside of the NPS –

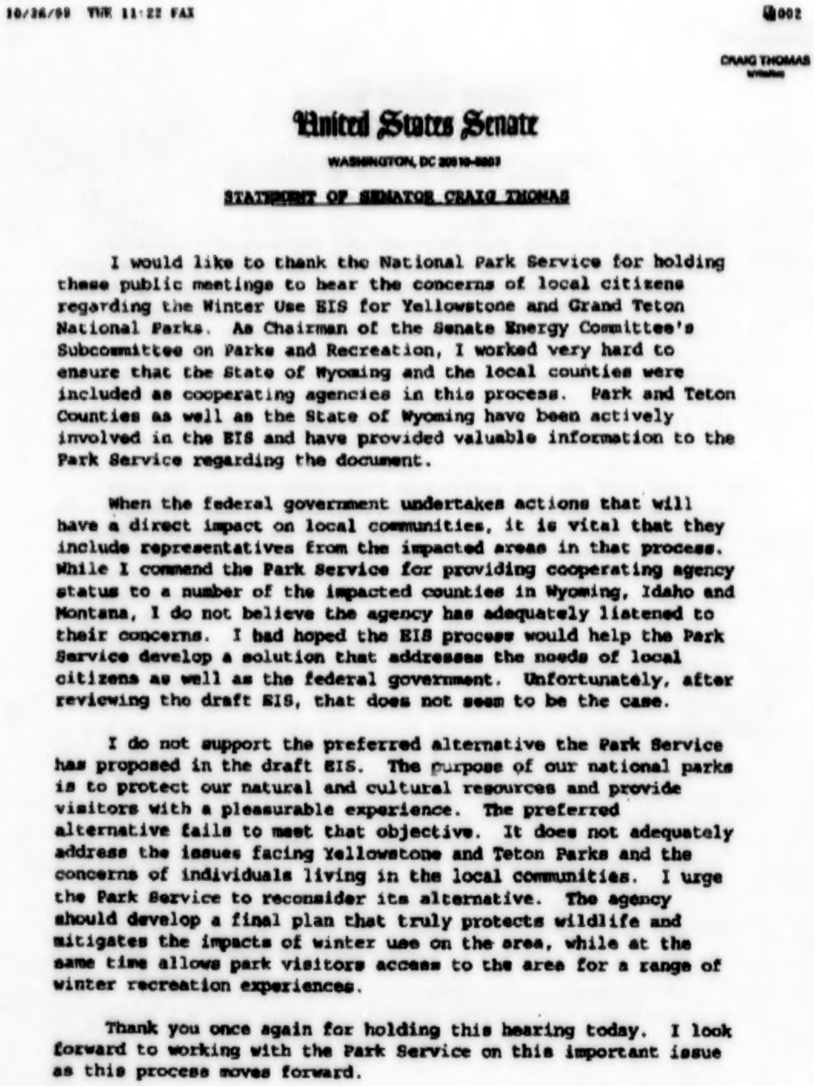
- The "Natural Regulation Alternative" submitted by The Fund for Animals
- The "Citizens' Solution" submitted by the Greater Yellowstone Coalition et al.
- The Jackson Hole Conservation Alliance Proposal
- The State of Montana's alternative
- Several versions of a "Revised E" alternative with minor differences submitted by the cooperating counties and the Blue Ribbon Coalition.

From the total number of documents reviewed, 1% or about 500 documents expressed a preference for an alternative proposed by the NPS in the DEIS. An additional 93% or about 43,100 documents expressed support for one of the five alternatives listed above.



*Includes all NPS alternatives and State of Montana and Jackson Hole Conservation Alliance Alternatives.

III



10/26/99 TUE 11:22 FAX 002

CRAIG THOMAS
WYOMING

United States Senate

WASHINGTON, DC 20510-[illegible]

STATEMENT OF SENATOR CRAIG THOMAS

I would like to thank the National Park Service for holding these public meetings to hear the concerns of local citizens regarding the Winter Use EIS for Yellowstone and Grand Teton National Parks. As Chairman of the Senate Energy Committee's Subcommittee on Parks and Recreation, I worked very hard to ensure that the State of Wyoming and the local counties were included as cooperating agencies in this process. Park and Teton Counties as well as the State of Wyoming have been actively involved in the EIS and have provided valuable information to the Park Service regarding the document.

When the federal government undertakes actions that will have a direct impact on local communities, it is vital that they include representatives from the impacted areas in that process. While I commend the Park Service for providing cooperating agency status to a number of the impacted counties in Wyoming, Idaho and Montana, I do not believe the agency has adequately listened to their concerns. I had hoped the EIS process would help the Park Service develop a solution that addresses the needs of local citizens as well as the federal government. Unfortunately, after reviewing the draft EIS, that does not seem to be the case.

I do not support the preferred alternative the Park Service has proposed in the draft EIS. The purpose of our national parks is to protect our natural and cultural resources and provide visitors with a pleasurable experience. The preferred alternative fails to meet that objective. It does not adequately address the issues facing Yellowstone and Teton Parks and the concerns of individuals living in the local communities. I urge the Park Service to reconsider its alternative. The agency should develop a final plan that truly protects wildlife and mitigates the impacts of winter use on the area, while at the same time allows park visitors access to the area for a range of winter recreation experiences.

Thank you once again for holding this hearing today. I look forward to working with the Park Service on this important issue as this process moves forward.

SENATOR CRAIG THOMAS, U.S. CONGRESS
Re: Based on DEIS, NPS has not adequately listened to the concerns of cooperating agencies. In the process of reviewing and commenting on the DEIS, an inordinate amount of focus has been placed upon the designation of alternative B as the preferred alternative. This has colored the response, and the relationship between lead and cooperating agencies. Clearly, cooperating agencies are concerned about this designation because of the perceived impacts of plowing the road from West Yellowstone to Old Faithful for wheeled vehicle access. Since the NPS has indicated it is leaning heavily toward DEIS alternative G instead of alternative B, it appears that a disproportionate amount of time was spent on alternative B and its consequences. NPS is investigating a full range of alternatives in the DEIS. Various features of each of these alternatives may be mixed and matched in the eventual decision. NPS feels that much of the criticism of the EIS, per se, is misdirected because the concern is really about the decision yet to be made. NPS wishes to perform a legal and fair analysis of impacts, limited by the time available under the court settlement. The cooperators have been included, and their input has been considered and documented in the DEIS. NPS respectfully submits that the cooperators feel they have not been listened to because of the decision they think NPS is going to make, not the adequacy of the EIS.
Re: The preferred alternative does not adequately address the issues facing the parks and the concerns of the local communities. Please see previous response. Considering the types and amounts of winter recreation use and the impacts that are at issue (i.e. sound, air pollution, health and safety, effects on other visitors, and damage to wildlife), alternative B is a possible approach to addressing some of the issues. At the time of DEIS' publication, it appeared to be the best approach to the Park Service, as presented on pages 38-39. CEQ Regulations do not stipulate the rationale for selecting a preferred alternative in an EIS. It stipulates that in a final EIS, a preferred alternative must be identified. The statement of preference for one or more alternatives in a DEIS is discretionary, depending upon whether the agency has a preference at that point (§1502.14(e)). The identification of a preferred alternative in a DEIS should be regarded by the public as extremely tenuous. This is because an EIS is to serve as a means of assessing impacts of proposed agency actions "rather than justifying decisions already made" (§1502.2(g)). The FEIS preferred alternative may be viewed more as a "precursor" decision, which will only become final in a Record of Decision that expresses the rationale for the choice. In any case, it is clear that merely the expression of a preferred alternative, by itself, can in no way invalidate the entire EIS analysis. The decision maker can select any of the proffered alternatives in a Final EIS through consideration of a variety of factors, including but not limited to environmental impacts. The selected alternative does not have to be the most environmentally preferable alternative, which must also be revealed in the decision document.
Re: NPS should develop a final plan that protects wildlife, mitigates impacts and allows access for a range of winter recreation experiences. This comment goes to the decision to be made, not to the adequacy of the EIS or the range of alternatives considered. However, the statement is essentially how NPS views the purpose and need for action, and how it constructed the range of alternatives. Under NEPA (see previous response), a decision is not made until it is made in a record of decision based on a final EIS. The decision maker must consider the full range of alternatives available in the EIS and carefully weigh all the possible impacts against the agency mandate, regulations, executive orders and policies. The alternatives presented and analyzed in the DEIS include actions supported by cooperating agencies, mostly identified as Revised Alternative E, and features of other alternatives.

RICK HILL
FOR ALL MONTANA

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RESOURCES

BANKING AND
FINANCIAL SERVICES

SMALL BUSINESS

UNITED STATES
HOUSE OF REPRESENTATIVES

November 23, 1999

Received DSC-An
Architecture

NOV 26 1999

Winter Use Plan
National Park Service
12795 West Alameda Parkway
Lakewood, CO 80228
Attention: Clifford Hawkes

Dear Mr. Hawkes:

Thank you for the opportunity to comment on the Winter Use Plan and Draft Environmental Impact Statement for the Yellowstone and Grand Teton National Parks and John D. Rockefeller, Jr., Memorial Parkway. I believe all Americans want to see our national parks managed in a way that protects the resources we value. But I also believe they want to continue to have access to those parks to enjoy the scenery and the wildlife. In the case of Yellowstone, that has included the use of snowmobiles to access the park in the winter season. I support continued snowmobile access to Yellowstone and the unique winter experience it provides for visitors from all over the world.

I had hoped this NEPA process, although complicated by the court's involvement, would provide an opportunity to evaluate how the public can continue to enjoy access while better protecting park resources. The purpose of NEPA is not to generate a document, but to produce responsible action on the ground. NEPA requires that the agency make informed decisions based on a clear and factual presentation of the impacts. The agency must also make diligent efforts to involve the public in their NEPA procedures. That includes listening to the public's concerns early in the process and providing the public with a well-reasoned document upon which to comment. In this instance, where the proposed action has impacts to the environment that are interrelated to social or economic impacts, all those impacts must appear in the NEPA document.

I was encouraged when the affected states and surrounding counties were granted cooperating status because they were in a position to both better inform the agency and enhance public participation by bringing key information to the process, particularly regarding economic and social impacts. Unfortunately, it seems the process to date, as embodied in this document, largely ignores the concerns of the cooperators and fails to meet the NEPA compliance test of taking into account all relevant information.

For example, earlier this year the agency missed deadlines for providing draft alternatives to the cooperators for review and input and failed to inform them in a timely manner as to the nature of the preferred alternative. The alternatives were delivered without advance notice on April 22, 1999 with a request to return comments by May 24, 1999. Subsequent requests by members of

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Page 2
November 23, 1999

the Congressional delegation to allow more time for response were denied by Park officials, who cited the pressing nature of the court-imposed deadlines. Unfortunately, the Park Service itself did not itself show good faith in meeting those deadlines as represented by their earlier actions.

As such, the cooperators' role, as well as the NEPA process, was compromised by the inadequate time for review and analysis, thereby denying the agency information that was critical to evaluating the economic and social impacts of the proposed alternatives. Most obvious is the fact that, while only the surrounding counties were granted cooperating status, the Park Service's economic analysis of the preferred alternative dispersed impacts over a much larger geographic area and, in effect, minimized the impact on the very entities it had earlier identified as having the greatest interest in this process. Without adequate time allowed, cooperators were made responsible for analyzing local economic impacts for a preferred alternative about which they were not even consulted in earlier discussions. Ultimately that resulted in a draft document now out for public comment that contains discrepancies in the information about the economic and social impacts of the various alternatives.

The document is also unclear as to the purpose and need for the proposed action. In this instance, the DEIS defines the problem by referring to the difference between existing and desired conditions without making a case for why such an abrupt change in current management is necessary or warranted. That is a key concern when activities allowed under current management have been sanctioned in the past by the very entity that now arbitrarily seeks their elimination. While the document identifies peripheral issues, such as concerns with snowmobile emissions and sound, none of the documentation points to a problem of such magnitude as to justify the preferred alternative, particularly one with such significant economic impacts to local communities. These impacts are not only felt by the business community, but also by local governments who may have to cut back on services as well as by local citizens who are going to see taxes increase at the same time economic opportunity decreases.

Furthermore, achieving the "desired condition" refers to the need for cooperative work between the National Park Service and other interests. To quote, " these desired conditions should be facilitated by cooperative work between the NPS, other agencies, local and regional governments, communities, concessions, commercial operations, and the equipment manufacturing industry." Yet none of the alternatives truly offers such a cooperative approach, and most certainly not the preferred alternative. In sum, NPS has simply offered a desired condition to be met, rather than determining an actual need for the proposed action. That glaring inadequacy is compounded by NPS's failure to provide an alternative that achieves the desired outcome. In fact, the experience cooperating entities have had to date with this process would suggest NPS may give lip service to seeking cooperation, but it is a hollow commitment on their part. It is that apparent disdain for the role of cooperators and the expertise they bring to this process that has produced such a flawed document.

I-3

Page 3
November 23, 1999

However, since the DEIS is the only document we have before us today for purposes of comment, I wish to go on record in opposition to the preferred Alternative B that calls for plowing the road from West Yellowstone to Old Faithful. Not only has the NPS failed to justify the need for this alternative, the agency has failed to adequately evaluate the impact on surrounding communities, on visitors, and on the physical and natural environment.

I do support efforts to address the concerns that have been raised with regard to the issues of winter use. However, I believe those concerns can be answered by modifications to Alternative E, similar to those proposed by the surrounding counties in conjunction with other interested parties. That approach emphasizes the protection of wildlife and other natural resources while allowing park visitors access to a range of winter recreation opportunities. It incorporates an adaptive planning approach that gives the agency flexibility in incorporating new information and technology while drawing on local expertise and input through creation of an advisory committee in compliance with the Federal Advisory Committee Act. Although I still have concerns about the DEIS in general, and the manner in which the cooperating entities have been treated, a modified Alternative E can realize NEPA's purpose to foster "excellent action" on the ground if the revisions proposed by the counties, snowmobile interests and local communities are incorporated.

Thank you for considering my comments. If you have any questions, please don't hesitate to let me know.

Sincerely,

Rick Hill

Rick Hill
U.S. Congressman

RH/pt

REPRESENTATIVE RICK HILL, U.S. CONGRESS

Page 1. Re: Affected states and surrounding counties. There is a desire on the part of NPS to cooperate. The effectiveness of the process used in this EIS relative to cooperating agencies is subject to debate, especially given the short time frames. Early on, NPS intended to invite the three states surrounding the parks to participate as cooperating agencies in developing the EIS. NPS believed the states could provide information on impacts to natural resources and local and regional economies. Without consulting with NPS, CEQ opined to a Wyoming Senator that counties also should act as cooperating agencies in this process. Thus NPS was faced with working with nine cooperating agencies, several of which had never before participated in a NEPA process as cooperators. Due to the schedule set by the settlement agreement, NPS had little time to work with cooperating agencies on what was expected of them in that role. This includes disagreements about the nature of special expertise in the NEPA process, and the burden of the cooperator in providing it. As a result, the cooperators often acted as though the relationship was one where the NPS was to provide information to them, instead of the reverse. NPS notes that Mr. Paul Kruse, designated representative for cooperating counties, states in his letter that the counties provided detailed socio-economic analysis and that NPS allegedly ignored the input. It is clear that roles and expectations in the process were, and are, not well understood, despite the cooperating agreements that were negotiated and signed.

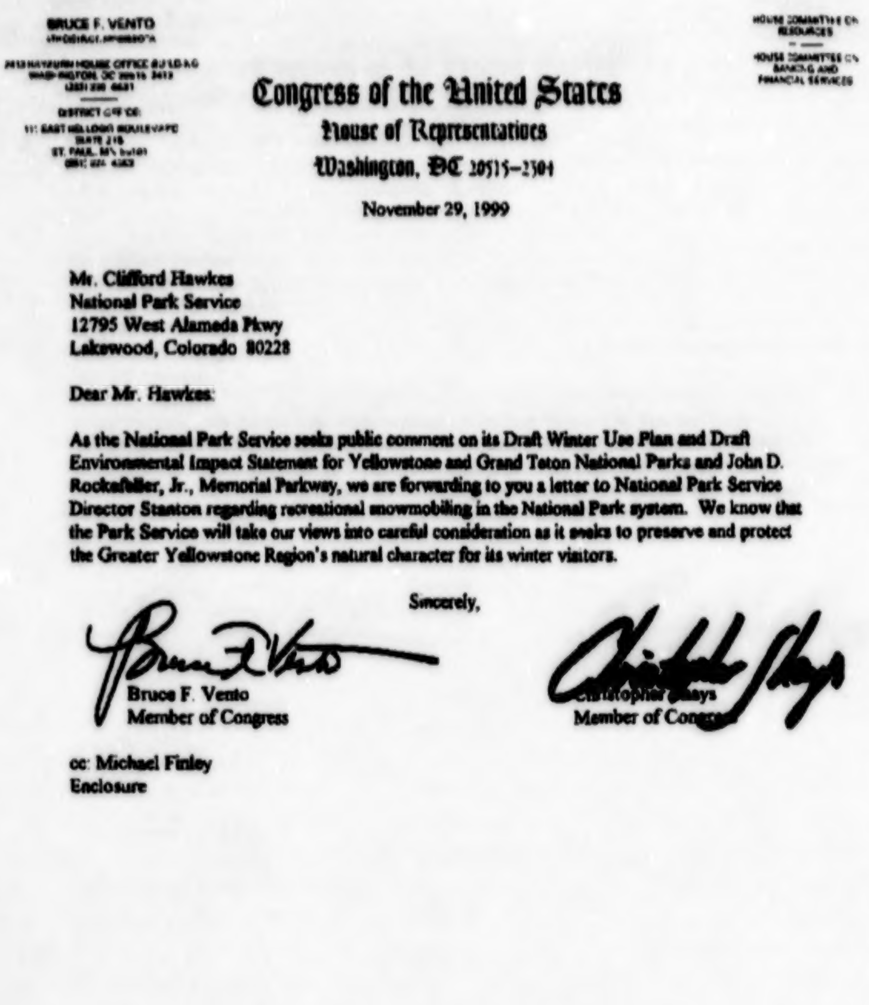
NPS has considered or used all information provided by cooperating agencies. The characterization of the socioeconomic environment specifically cites information from the cooperators or their consultants. It may not have been clear in the DEIS how all the information was used, so the final EIS will cite all cooperating agency materials. On pages 298 through 315, the DEIS discloses the impacts of each alternative on adjacent lands in the cooperating agencies' own terms.

The cooperating counties attested in the agreements that they would provide special expertise in the areas of social and economic analysis. This analysis was to be applied to the range of alternatives, not just the preferred. The designation of a preferred alternative in a DEIS is peripheral to the process, since the final decision must choose from the full range of alternatives presented in the EIS, with their consequences (§1502.14(e) and §1505.2(b)). Cooperating agencies had information about the range of alternatives, including the eventual preferred alternative, with time in which to develop economic analyses sufficient for this programmatic assessment. NPS reiterates that the inexperience of cooperators in performing such a NEPA analysis, along with the short time frame, unfortunately led to the current state of affairs.

Page 2. Re: Economic assessment using 17 counties. It was the judgment of the economic consultant used by NPS that the 3-state area and the 17-county area were sufficient to answer the question about impacts on the regional economy. Considering the issues raised by local governments, NPS agrees it is appropriate to focus on the 5-county area containing gateway communities to the parks. The economic model will be re-run on this level. Input-output models that are available for performing this type of analysis are appropriate only for economies at the county and regional levels. Impacts on communities is within the purview of the state and local cooperating agencies and their stated special expertise. By and large, none of the cooperators provided specific effects on communities for each alternative. Most focused only on the effects of the plowed road from West Yellowstone to Old Faithful in preferred alternative B insofar as it would affect West Yellowstone. This is only one part of one alternative, whereas the eventual decision must consider the full range of effects for all alternatives.

Page 2. Re: Purpose and need. This comment reflects the sentiment from a number of snowmobile interest groups that there is really no problem with the current use in the 3 park units. There are identified gaps between existing conditions and desired conditions, and they form the basis for the purpose and need for action. The underlying purpose (§1502.13), or goal to be achieved as stated at the scoping stage is to provide a full range of quality winter experiences offered in appropriate settings and having no significant adverse impacts on park values. This purpose is represented by the desired condition shown on page 3 of the DEIS. The underlying need (§1502.13) is defined by the existing conditions expressed on page 4, with detailed expansion in Chapter III, Affected Environment. Despite the complexities introduced by multiple goals and multiple issues, the alternatives in Chapter II represent possible actions that meet the

REPRESENTATIVE RICK HILL, U.S. CONGRESS
underlying purpose and need. The range of alternatives is sensitive to the need for people, businesses and local governments to adapt to change. Most alternatives do not represent wholesale, abrupt changes, and some features of some alternatives do not apply for seven or eight years. Adaptive management, as expressed in alternative E represents a programmatic status quo, except that focused study over time may result in management changes. The commenter states that the treatment of existing versus desired condition, and issues pertaining thereto, are peripheral. NPS and many people who commented during the scoping process and on the DEIS disagree with this assessment of the issues.
Page 2. Re: Effects on business community and local government. See response above. This statement is a reaction to a portion of the preferred alternative. Not all alternatives, nor pieces of preferred alternatives would impact all local businesses in all gateway communities. As a side note, NPS must be sensitive to the effects of management on local communities. However, when there is an identified conflict between local economies and the protection of park values, park values must be emphasized.
Page 2. Re: The Park Service's lip service to cooperation. The premise for "cooperation" as stated in the purpose and need section is that implementing or achieving desired conditions of a program is facilitated by both NPS and local government, communities and user groups. This cooperation is to be distinguished from the series of statements regarding desired condition of parklands and opportunities for use of those lands. The premise for "cooperation" in regard to the involvement of cooperating agencies in this EIS is that those agencies have the responsibility to provide data concurrent with their identified special expertise (§1501.6 (b) and §1508.26). To state that the measure of cooperation is for NPS to select an alternative that the cooperating agencies or local governments (and businesses) like is beyond NPS understanding of cooperation in either context. NPS has been clear about its decision-making authority throughout the process. The cooperating agencies have concurred that the final decision lies with the park service. CEQ Regulations do not stipulate the rationale for selecting a preferred alternative in an EIS. It stipulates that in a final EIS, a preferred alternative must be identified. The statement of preference for one or more alternatives in a DEIS is discretionary, depending upon whether the agency has a preference at that point (§1502.14(e)). The identification of a preferred alternative in a DEIS should be regarded as extremely tenuous, and it is not a factor by which the validity of an EIS is gauged. Therefore, NPS disagrees that the document is flawed. NPS has identified the purpose and need for action, has developed a full range of alternatives to address the need and the public's issues, and has disclosed the effects of those alternatives all in accordance with the CEQ regulations for an EIS.
Page 3. Re: Objection to alternative B. Under CEQ regulations, NPS is not required to justify the designation of a preferred alternative. It is required to explain the rationale for an alternative that is eventually selected and announced in a record of decision following the publication of an FEIS. Expressions of support and opposition relate to the decision that the commenter would like to see NPS make. The general response to such comments is that the commenter's opinions will be considered in making the final decision, but there is nothing in those opinions that substantively would alter the range of alternative features to be evaluated in the Final EIS. To illustrate, if the features not supported were to be deleted from the range of alternatives then the analysis would be left only with features that the commenter agrees with. If only the actions that are liked by the commenter remain, then there is effectively only one alternative.
Page 3. Re: Support for Revised Alternative E. Revised Alternative E comes from cooperating agencies and the Blue Ribbon Coalition in a variety of forms. The essentials of Revised Alternative E, all versions considered, are not significantly different from alternative E as presented in the DEIS, especially considering the programmatic nature of the proposed action. See the matrix comparison of Revised Alternative E versus the features analyzed in the range of alternatives. This may be found in FEIS Chapter I in the section "Alternatives Suggested During the Public Comment Period." All alternatives in the DEIS meet the purpose and need for action to a greater or lesser degree.



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Congress of the United States
House of Representatives
Washington, DC 20515-2304

HOUSE COMMITTEE ON
RESOURCES

HOUSE COMMITTEE ON
BANKING AND
FINANCIAL SERVICES

November 29, 1999

Mr. Clifford Hawkes
National Park Service
12795 West Alameda Pkwy
Lakewood, Colorado 80228

Dear Mr. Hawkes:

As the National Park Service seeks public comment on its Draft Winter Use Plan and Draft Environmental Impact Statement for Yellowstone and Grand Teton National Parks and John D. Rockefeller, Jr., Memorial Parkway, we are forwarding to you a letter to National Park Service Director Stanton regarding recreational snowmobiling in the National Park system. We know that the Park Service will take our views into careful consideration as it seeks to preserve and protect the Greater Yellowstone Region's natural character for its winter visitors.

Sincerely,

Bruce F. Vento
Bruce F. Vento
Member of Congress

Christopher Shays
Christopher Shays
Member of Congress

cc: Michael Finley
Enclosure

Congress of the United States
House of Representatives
Washington, DC 20515

July 30, 1999

Mr. Robert G. Stanton
Director
National Park Service
1849 C Street NW
Washington, D.C. 20240

Dear Director Stanton:

We, the undersigned Members of Congress, write to express our strong support for the National Park Service (NPS) and its long and successful history in protecting America's National Park System. However, we are concerned that excessive recreational snowmobile use in the park system has made it difficult for our park rangers to manage and preserve our national and natural heritage as envisioned by the Organic Act.

We are concerned that the inadequately regulated use of snowmobiles is burdening the irreplaceable resources of our national parks. Regulated motor use is permitted, not mandated, in our non-wilderness park areas.

As more people discover the beauty and magnificence of Yellowstone National Park and other snow affected parks, the number of snowmobiles entering them has dramatically increased. This has created a difficult situation for our resource managers to achieve an equitable balance between those who visit and enjoy the park and the proper management and preservation of its resources.

It is estimated that 60,000 snowmobiles enter Yellowstone each year and release over 100,000 gallons of unburned gas and more than 2,000 gallons of unburned oil into the park's environment. At Old Faithful, one weekend's worth of snowmobile traffic produces the equivalent of a years worth of automobile pollution released in the park. In 1995, carbon monoxide (CO) levels reached a nationwide high of 36 ppm at West Yellowstone. These unacceptably high levels of CO pose a serious threat to the health of park rangers, concession employees, surrounding wildlife, and the snowmobilers themselves.

The noise pollution from snowmobiles in Yellowstone is also a significant factor to consider. Many park visitors report hearing snowmobile noise in the backcountry as far as ten miles from the nearest road. Such noise disrupts the quiet formerly associated with Yellowstone in the winter. Snowmobiles also cause problems for wildlife. In Voyageurs National Park, endangered gray wolves have been shown to avoid areas of the park open to snowmobiles.

The NPS Organic Act mandates that park resources be left "*unimpaired for the enjoyment of future generations*." Executive Order (E.O.) 11644 places the burden of proof upon the National Park Service to prohibit off-road vehicles unless they are documented to pose no threat to park resources. The Clean Air Act calls on federal land managers to "*preserve, protect and enhance the air quality in national parks . . . with an affirmative responsibility to protect the air quality related values . . . within Class I areas.*"

Poorly regulated snowmobile use is an unnatural and unnecessary threat to park resources and the parks' non-motorized visitors. However, even with minimal environmental restrictions in place, snowmobile enthusiasts continue to insist on opening more extensive areas for their use. Until the National Park Service establishes an environmentally prudent policy which addresses the use of snowmobiles, we feel that the resources and visitor experience of our nation's parks are seriously threatened.

It is our hope that the NPS has the foresight to review its snowmobile regulations on Park Service lands before operation and maintenance becomes an effort in rescue and rehabilitation. We believe that a Service wide standard and direction to manage snowmobiles in an ecologically sensitive manner will give park superintendents a reaffirmation of their authority and lawful responsibility to develop and manage long-term plans that will create healthy park lands and a healthy environment for the people who use these lands.

Snowmobiles in Yellowstone are a perfect example of why off-road vehicle use must not be allowed to become improperly established on public lands without a thorough examination of all potential impacts. The current boom in personal watercraft popularity poses similar threats. Therefore, we support the responsible control of recreational snowmobile and personal watercraft activity in our national parks, and urge the NPS to deliberately regulate the use of snowmobiles so as to retain park resources unimpaired, and to protect the rangers, concessionaires, other visitors, and snowmobile operators.

Sincerely,

Bruce F. Vento

Christopher Shays

Lloyd Dogget

Luis V. Gutierrez

Ed Pastor

Patsy T. Mink

Neil Abercrombie

Lynn N. Rivers

Robert T. Matsui

Sam Gejdenson

Anna G. Eshoo

Nancy L. Johnson

Bill Pascrell

John F. Tierney

Lane Evans

Gary L. Ackerman

Maurice D. Hinchey

Earl Blumenauer

Tom Lantos

Pete Stark

Sam Farr

Brad Sherman

Donald M. Payne

Rosa DeLauro

William Delahunt

Ed Markey
Edward Markey

Ellen Tauscher

Julian Dixon

Michael McNulty

Constance Morella

Frank Pallone, Jr.
Frank Pallone

Diana DeGette
Diana DeGette

Jim McGovern
James McGovern

Sue Kelly
Sue Kelly

Jim Moran
Jim Moran

Howard Berman

Henry Waxman

Nancy Pelosi
Nancy Pelosi

Page 1. Re: Concern about excessive snowmobile use relative to preservation of natural heritage. This concern is reflected in the purpose and need for action articulated in the DEIS.
Page 2. Re. Examination of impacts, and support of snowmobile regulation. The purpose of the DEIS, and the FEIS to be published, is to evaluate the impacts of snowmobiles and other forms of winter use and access. NPS might argue that the establishment of this use appeared to be in concert with park service mandates and policies at the time. In retrospect, and considering the amount of use that exists today, it is more than timely for this analysis to be undertaken. The range of choices for winter use, the impact mitigation that is available, and the disclosure of effects in the FEIS will be factored against laws, executive orders and policies to arrive at the decision.

United States Department of Agriculture | Forest Service | Shoshone National Forest | 808 Meadow Lane
Cody, WY 82414-4516

File Code: 1950-4

Date: November 30, 1999

Clifford Hawkes
12795 West Alameda Parkway
Lakewood, CO 80228

Mr. Hawkes,

Attached with this letter are the Forest Service's comments to the Winter Use Plan Draft Environmental Impact Statement. These comments represent the review work done by the GYCC Forests: the Beaverhead-Deerlodge, Bridger-Teton, Custer, Gallatin, Shoshone, and Targhee National Forests.

We greatly appreciate the opportunity to comment on the DEIS. On behalf of the GYCC Forests, I also wish to compliment the NPS team for doing a great job in pulling together a lot of work in a tight time frame. I know this has not been an easy thing to do.

In that spirit, the intent of the attached comments is to assist the NPS team with the complex and demanding task of reviewing comments and putting together a Final EIS and Decision. It is not our intent to express a preference for any particular alternative in the DEIS.

For the various analyses to all come together in the FEIS, clearly there will be a need for good communication between our agencies during the preparation of the FEIS. We look forward to working with you during that time.

Sincerely,

Rebecca Aus

REBECCA AUS
Forest Supervisor

RT/iw

Enclosure

Comments specific to Chapter II - Alternatives.

The "*adaptive management*" approach to several alternatives makes predicting effects almost impossible

In the strictest NEPA sense, it was at times difficult to see the relationship between the significant issues, and how the alternatives address resolving those issues.

Comments specific to Chapter III - Affected Environment.

Wildlife related comments.

The geographic scope of the analysis appears to be entirely limited to YNP, GTNP and the Parkway. Since there are important effects to resources on adjacent Forests and other lands, how can they be ignored? NEPA analysis must include all effects and the analysis area must have appropriate geographic and temporal boundaries. Park boundaries are not appropriate boundaries for wildlife species analysis, and boundaries will differ by species.

The Park's winter season runs mid-December to mid-March, which is shorter than the winter use season on adjacent lands, but the DEIS considers this the temporal scope. This is incorrect because impacts on adjacent lands will occur outside these dates and perhaps impact species like grizzly and black bears, that, although they are typically hibernating for the Park's winter season, are often active during part of the winter season on adjacent lands (p. 81).

p. 120 - T&E section - The 2 lynx species listed in the DEIS are the same species. The Canada lynx (*Lynx canadensis*) is proposed for listing, but the decision date on that is still pending. It may not be listed, or may be listed as either threatened or endangered. *Felis lynx* is an out-of-date scientific name as is *Felis lynx canadensis*. We recommend the use of the Interagency Draft Lynx Conservation Strategy or some other recent listing related document as a reference. The Draft Lynx Conservation Strategy, which all agencies have cooperated on and plan to sign, has some very clear wording on effects of winter use activity on lynx. Lynx habitat is supposed to by analyzed using Lynx Analysis Units and GIS techniques, and the Conservation Strategy has draft objectives, standards and guidelines for winter use. Since the FEIS and ROD will probably not be signed for a while, we recommend the Park Service consider conducting the recommended analysis and using the objectives, standards and guidelines between draft and final.

The Species of Concern list is very confusing. Is it state listed and Forest Service sensitive or what? This is not real clear. You currently have some of Region FS sensitive species that are on the Gallatin NF for instance, but not all of them (like goshawk, black-backed woodpecker, and a couple other terrestrial species, not to mention 21 plant species).

p. 82 & p. 120 - update Birds section as the peregrine has been delisted. Drop peregrine from T&E section since it is no longer listed unless you want it to be a Species of Concern.

p. 115-116, bison section needs more information on how bison move in the winter. Recent graduate work from MSU has shown that bison move quite well away from groomed roads in the winter by traveling single file across Mary Mountain, etc., so that the groomed roads may not really have that significant of an effect on bison movement as previously thought. Really the work being done on the Yellowstone Bison Plan and EIS should be incorporated into this winter-use plan.

p. 120, scientific name for western or boreal toad is incorrect in text- it is *Bufo boreas boreas*, and I believe it should be referred to as 'western' or 'boreal' but not both.

p. 121 - wolf - We think the usage of 'extirpated', in this context, does not sound right. Maybe the use of 'reduced' is more appropriate.

p. 122 - wolf wording "This allows agencies more options for relocation or removal of individuals preying on livestock (USFWS 1994)". It would be more complete (and less biased) to say something that quotes ESA 10(j), which indicates that the population is not essential to the continued existence of the species and critical habitat will not be designated. In the Wolf Reintroduction DEIS, (p. 2-5) it says management would allow wolves to be killed or moved under some conditions by various agencies for domestic animal depredations and excessive predation on big game populations.

p. 122 Bald Eagle - Bald eagles have met their recovery criteria and are expected to be delisted in the year 2000, maybe before the ROD is signed

p. 123-124 - Lynx, what's this two species of lynx again? We recommend that the document should give the reader a general idea of the location of Signal Mt. Also, does YNP have the habitat to support lynx? Only GTNP was mentioned here. Have you run a habitat model or query to see where lynx habitat is in these Parks? That would be useful in relation to where the winter use is occurring and where potential habitat is. Then you could say something about impacts and potential for fragmentation, etc.

p. 124, fisher, marten and otter - if you are going to include fisher, marten and otter as species of concern, you need to give a little more habitat information here--the only one you really discussed habitat for was wolverine. You can't analyze effects if you don't describe the habitat.

p. 125. amphibians - again, Can't analyze effects if you don't know what habitat they use, or if you haven't told the reader.

p. 126. fish - you need to tell the public where these species are found - their distribution in relation to winter use would help with impact analysis

p. 126. plants - there are a bunch of plants on the Forest Service sensitive lists and probably on the State lists of species of special concern - they aren't discussed at all-- only one species of plant is discussed-is this sufficient?

p. 175 - Effects common to all alternatives - wildlife - need to explain the average distance or distance at which a human can hear 70dbA - this is not an understandable impact at this point

p. 182, ungulates - it would be better to describe highway 191 as linking Bozeman and West Yellowstone than Bozeman and Big Sky

p. 184 - need some references, citations or personal communications for some of this information --same on p. 185--you need cites on displacement, energy expenditure, etc.

p. 186, Is there any concern with fragmentation of lynx habitat in YNP? The analysis of impacts between YNP and GTNP is very different with YNP apparently focusing on grizzly bears and GTNP focusing on lynx.

p. 186, It appears the first part of the section on wolves at the bottom of 186 should be moved up into the "Presence of use of plowed roads" section just above it. Again, this section is lacking in references although it has a few.

p. 189-190, although you listed otter, pine marten and fisher and the two amphibians as species of concern, there is no discussion of effects at all, and one is need here. Also, you need to address these species for the other alternatives. Since they are species of concern, there must be some analysis and conclusion of effects.

p. 197 mentions shift of winter use from the park to other areas of the GYA; since it is obvious that what happens in the Parks influences the surrounding areas, how can you totally ignore effects to wildlife on the National Forest if snowmobile use is displaced to those areas?

p. 211, T&E, first paragraph, How would having a plowed road vs. groomed road potentially impinge on pre-denning activities of grizzly bears? This is unclear, and given the following sentence may be irrelevant.

Socioeconomic related comments.

While much of the descriptive economic information was informative, we would recommend that the data be displayed down to the county level, as well as the aggregate 17 counties.

We also recommend more work be placed describing the communities of interest, their historic and current economies, and social values.

Winter Visitor Use related comments.

We recommend that this section's information be updated in the FEIS analysis with the findings of the Winter 1998-1999 Visitor Survey in YNP, GTNP and GYA: Analysis and Results prepared by John Duffield and Christopher Neher.

It seems important to forge ahead with some definitions of carrying capacity (volume of allowable use for various user groups in each zone) - and quantify those limits. The effects of various alternatives would be easier to describe if the amount of allowable use (and therefore use likely to be displaced) was quantified.

At some point, and perhaps we have already passed it, Yellowstone will exceed its carrying capacity for winter use. Whether or not the park reduces visitor numbers, closes routes, or restricts the use season, the national forests will see the effects of increased winter use in the region. Any alternative that displaces use from the parks to the forests will increase the effects we have already experienced, including overflowing trailheads, the need for increased grooming on heavy use trails, and the expansion of motorized use into areas that were formerly quiet in winter. Some of this is due to changing technology and increased interest in this region and is not an effect of what the parks may do. The national forests have different authorities than the parks to regulate and manage use, and we have concerns about visitor safety, intrusion into wilderness, the need for more developed facilities than we now provide, and the need for patrols and visitor assistance.

As for the expected change in use on the national forest if Yellowstone and/or Grand Teton restrict snowmobiles, that is somewhat speculative. Those who seek opportunities off the groomed trails already use the national forests, so non-outfitted use may not increase greatly. Some businesses that guide snowmobile trips tell us that if their use in Yellowstone is restricted, they will probably curtail or eliminate their winter operations, since the main draw to out-of-area tourists is Yellowstone. Others are already building their business around snowmobiling opportunities on the forest, and they may be asking for more use days on the forest if their national park use is curtailed. The main area where we see the potential for a great increase in use is with rental snowmobiles. Those individuals who rent a machine to go into the parks would be likely to rent one to go into the forests instead, as we've already seen in the past few years. Again, with clients of many outfitters, some of these visitors will want to go only to the parks, so it's hard to say what the effect on the forest might be.

Comments specific to Chapter IV - Environmental Consequences.

Alternative A (no action). There would be no direct effects from changes in management of the national parks during winter, but effects from continued and increasing use of the overall area would still be felt. There is more winter recreation use on the forests each year, especially snowmobiling off-trail; several winter resorts on the forest are expanding and offering new services; new resorts on private land adjacent to the forest are planned.

Alternative B (Proposed action). Although applicable to the national parks only, the effects of new emission and noise standards for over-snow vehicles may result in a general clean-up of snow machines on all public lands, which would be a positive benefit for the national forests. Displacement of all the older machines from the parks onto the forests is another possibility.

The visitor information and education efforts outlined under Alternative B could have a positive indirect effect on the forests if the same visitors who hear a message of etiquette in the parks also use the forests.

Of the specific actions listed for each of the national parks, the only one that will effect recreation use on the Bridger-Teton Forest is the proposed snowmobile trail in Grand Teton National Park that runs from the parking area north of Mailbox Corner to Cunningham Cabin. It is hard to tell from the map or the text if the plan is to plow to the existing parking lot just beyond Carpenter Draw. The descriptions of the trailhead in Alternatives D and E are the same as what is there now, so this leads one to guess that under Alternative B the trailhead would be moved elsewhere. If this is the case, this action would displace skiers from the Shadow Mountain area and the trail they currently use. Increased development of this trail for snowmobiling may encourage more of that use on Shadow Mountain, which is currently being managed for both snowmobilers and skiers. The national forest objective here is to continue managing for both uses, but if snowmobiling increases significantly, the skiers will be displaced. Some skiers will also be displaced by the increased length of flat tracking along a snowmobile trail before they reach the forest.

Page 299 The statement made under the discussion for the B-D NF "Increased impacts from more human activities on the habitat of animals such as lynx, marten and wolverine could occur" really applies to all national forests. The notion that displaced use onto the Hebgen Lake RD would increase risk for accidents, increased congestion and so forth is accurate. What is not stated is that potential increase in use will affect the quality of the NF visitor's experience - by increasing crowding, noise, pollution, declining trail conditions, and so forth. Other potential issues compounded by displacing traffic from Yellowstone NP onto the Forest include increased trespass into wilderness areas, ie the Lee Metcalf or Absaroka-Beartooth Wilderness, and into other closed areas (wildlife winter range primarily). Without more accurate predictions of what Alternative B will actually do to existing use patterns - accurate disclosure of effect is impossible. More analysis should be accomplished before the release of the FEIS to more accurately display just exactly what will happen to winter users displaced from the

Parks, both in terms of how many users are likely to be displaced to the Forests, and to where.

Alternative C. Noise and emission standards contemplated for the parks in this alternative would probably have an indirect positive effect on the forests, as described in Alternative B.

The proposed east side snowmobile trail between Grand Teton National Park's south boundary and Moran would effect existing nonmotorized uses on the national forest east of the park. Existing access by passenger car to the Shadow Mountain trailhead would be eliminated. This would displace cross-country skiers from the entire Shadow Mountain area, one of the most popular ski trails in Jackson Hole. This is not compatible with national forest objectives; the winter use assessment that we and the national parks participated in for the past several years showed that the Bridger-Teton Forest offers little opportunity for family skiing and easy terrain, and what is offered (Cache Creek, Shadow Mountain, a few other places) is also used increasingly by snowmobiles. So this action would eliminate a use on the forest that we are trying to maintain.

Page 300 Statements like "Forest use could increase or decrease under alternative C..." are woefully inadequate to address the likely real and potentially significant effects to adjacent National Forests. This statement discloses nothing. Again - before release of the FEIS, focused market studies and additional analysis are paramount to be able to predict just exactly what will happen to winter users displaced from the Parks, both in terms of how many users are likely to be displaced to the Forests, and where.

Alternative D. Noise and emission standards contemplated for the parks in this alternative would probably have an indirect positive effect on the forests, as described in Alternative B.

Of the specific actions shown for the parks, the only one that would affect the Bridger-Teton Forest is the planned ski/snowshoe trail from Shadow Mountain. The trailhead will remain where it is today, but the road north of there will be managed for nonmotorized uses only. This would displace snowmobiling from the Shadow Mountain area. The national forest is managing Shadow Mountain to accommodate both snowmobiles and skiers, so this action would not be compatible with national forest objectives.

On Page 301, under alternative D effects analysis, the NPS prescribing what the Gallatin NF could do in terms of mitigation of effects accrued through displaced nighttime users of the Park. Instead, we recommend that the document make an actual prediction of how many users and to where they might be displaced first, then work with the Forest to design mitigation.

Under this alternative, closing access to YNP from the East Entrance is likely to displace those users to the Cooke City area and Beartooth Plateau. This increase in use will likely increase existing trespass problems in the Absaroka Beartooth Wilderness, and stress an already overtaxed infrastructure (e.g. place additional pressure on limited parking facilities). For public safety as well as environmental issues, a significant increase in snowmobile use on the Beartooth plateau due to east entrance closures would be a very undesirable result.

Closing the east entrance would also eliminate all YNP day-use by residents in the Bighorn Basin. If these day-users want to experience YNP, they would then have to drive 5-7 hours to access either the north or south entrances, thus requiring overnight lodging. This would likely increase use and congestion at those two entrances.

We recommend that the east entrance be left open, so that use can be dispersed throughout the park, and so that users living in communities east of the park still have day-use access.

Alternative E-F. The only specific action in this alternative that may effect the Bridger-Teton Forest is the development of the existing Shadow Mountain trailhead to serve more snowmobiles. This may encourage more of that use on Shadow Mountain, which is currently being managed for both snowmobilers and skiers. The national forest objective is to continue managing for both uses, but if snowmobiling increases significantly, the skiers will be displaced.

Page 302 What does the statement in the second paragraph under alternative F "Currently, access for dispersed backcountry use is limited, except to areas that are generally closed for wildlife purposes" mean? It is not accurate - generally most NF is widely accessible for dispersed backcountry use. Under this alternative - all backcountry use in YNP would be eliminated except on certain designated front country routes. This will likely displace a large number of backcountry skiers and snowshoers onto the Gallatin National Forest. Without an estimate of how many users would be displaced, and to where, accurate effects analyses are difficult. However, some likely effects would include things like: more competition for "quiet places", increased conflicts between motorized and non motorized users, more stress on a limited infrastructure (e.g. plowed parking areas), increased safety issues as more users head into avalanche terrain, conflicts with wildlife species like lynx, wolverine and wintering ungulates and an overall loss in the quality of visitors experience where crowding is an issue. Limited "front country" family friendly skiing and snowshoeing options was one of the emerging issues identified in the Winter Use Study completed by the GYCC in 1996 for the Gallatin NF. Displacing backcountry users from YNP onto the Gallatin will only add to that problem.

Alternative G. Noise and emission standards contemplated for the parks in this alternative would probably have an indirect positive effect on the forests, as described in Alternative B. On the other hand, there will likely be a significant increase in snowmobile use on all national forest by users who own noncompliant machines.

Of the specific actions shown for Grand Teton National Park, one that would affect the Bridger-Teton Forest is the planned ski/snowshoe trail along the east boundary of the park. This would displace snowmobiling from the Shadow Mountain area. The national forest is managing Shadow Mountain to accommodate both snowmobiles and skiers, so this action would not be compatible with national forest objectives.

Another action that would effect use of the National Forest is closing the road north of Colter Bay and developing it as an over-snow route. Though skiers would be able to ride a snowcoach to get into destinations such as Huckleberry Mountain, the coach schedule would be unlikely to match exactly the planned day of a skiing party. It is unlikely that the snowcoach would be able to serve skiers whose destinations were elsewhere in the Teton Wilderness (south of the Flagg Ranch/Huckleberr Mountain area), so there would be some displacement of the current use on the west side of the Teton Wilderness.

Effects on Adjacent Lands. This discussion appears to be devoid of effects disclosure for anything other than recreational user conflicts and issues. Just the impact to wildlife from shifting snowmobile use to the Forest deserves more analysis, not to mention other impacts, eg. wildlife issues, trespass in Wilderness, increased air and noise pollution, and safety and liability concerns.

Also, there was no discussion on possible effects to the Custer NF, Beartooth RD. Alternatives D and G which eliminate snowmobile traffic from the East Entrance will likely displace those users to the Cooke City/Beartooth Plateau area. Increased use on the Plateau could heighten trespass problems in the Absaroka Beartooth Wilderness. Increased traffic on the Plateau from the Red Lodge side could present safety issues to the District on this nongroomed unmarked route, as it traverses dangerous avalanche terrain. This route is also only appropriate for experienced riders, and displaced users may not be aware of the hazards. Parking at trailheads on the Red Lodge side is limited.

The socioeconomic impacts of each of the alternatives needs to be more clearly displayed. Having the state's write up separate from the socioeconomic section of each alternative is confusing and essentially eliminates useful comparison of the alternatives. Much of the quantitative impacts need to be summarized in tabular format so that comparison between the alternatives can be more easily understood.

We strongly recommend that socioeconomic impacts be displayed and discussed down to the county-level whenever feasible. We also recommend that a summary table, or set of tables, be developed to display the various socioeconomic metrics for all alternatives.

Cumulative Impacts Analysis. The disclosure of effects here are inadequate. The "what if" scenarios displayed discuss outcomes which are 180 degrees opposite in effect. It is important to quantify the actual displacement effects of each alternative of both motorized and non motorized users to be able to address cumulative effects.

No other activities on adjacent National Forests which certainly could contribute to cumulative effects were discussed in this section - such as ongoing land exchanges, timber harvest, bison activities, travel management changes, etc. The only effects discussed were recreation related, and not very quantitative.

Comments specific to the Appendices.

Appendix A - USFS listed under coordination for fish and wildlife - there is nothing in the DEIS about National Forest wildlife and fish resources other than a sensitive species list (that is incomplete). It appears that much of our more important input and feedback was not included or incorporated, eg. geographic scope of effects and inadequate analysis outside of the Parks.

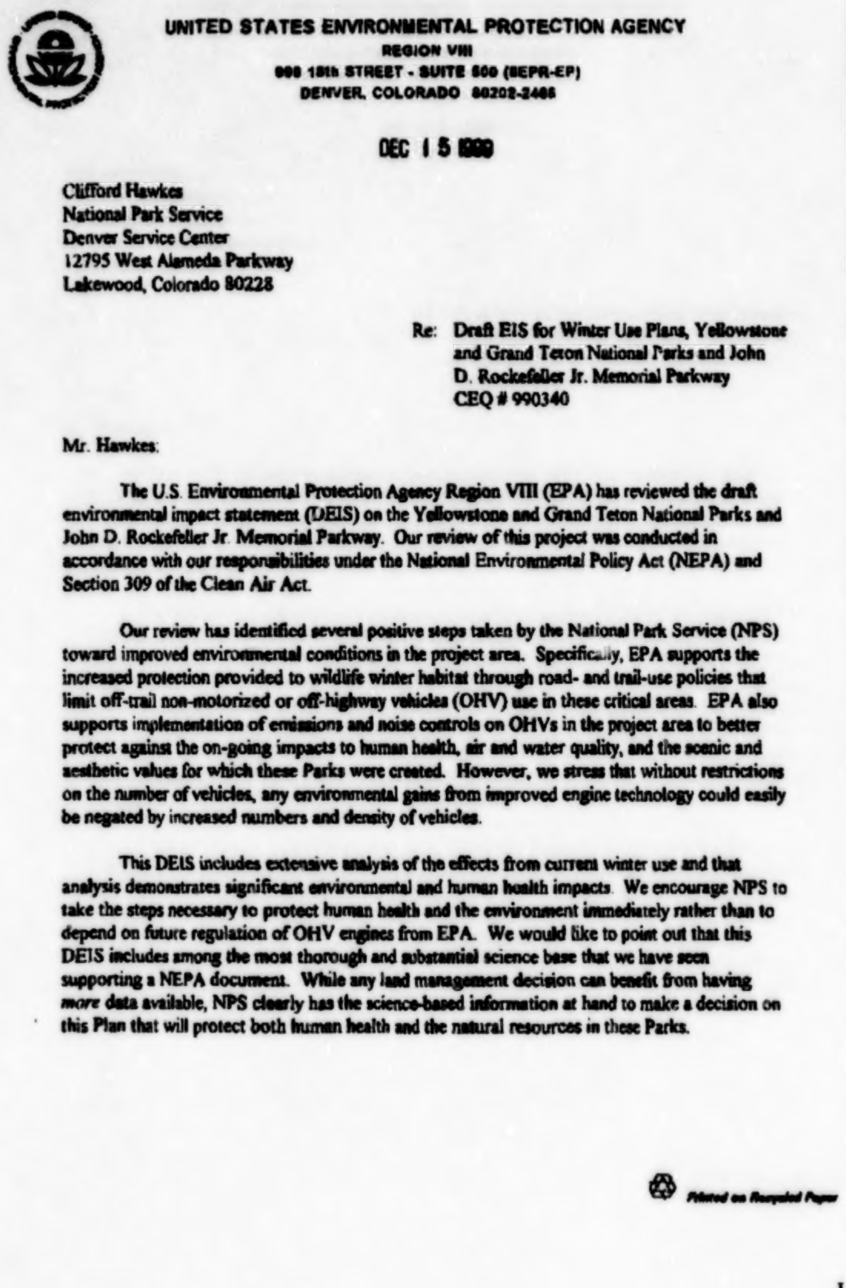
Appendix G - no status given for bald eagle, white-faced ibis and peregrine in table. Pine marten not listed in table but listed in text as species of concern. Last page of Appendix G, federal species of concern-are they supposed to be addressed in text? They aren't for the most part.

Many comments throughout the letter refer to incorrect terminology, minor clarifications, suggestions about wording, typographic errors, etc. These comments are helpful and will be considered and incorporated as needed. NPS feels that there is no need to respond individually to these types of comments, beyond this statement.
Page 2. Re: Adaptive management. As indicated in the DEIS, some things are fairly certain about adaptive management alternatives. With the implementation of any such alternatives, activities and their impacts remain the same as in the current management situation in the short term. Forests should view such alternatives, and the Winter Use Plan/EIS in general, as a programmatic approach to management. Effects analysis for this document is on the same level as in a Forest Plan EIS, with specifics about types of effects for types of activities, mitigation measures, and standards and guidelines. That kind of analysis is less about numbers and site-specific impacts and more about probabilities and contingencies.
Page 2. Re: Relationship between the significant issues, and how the alternatives address resolving those issues. Efforts will be made in the FEIS to build a stronger linkage between the alternative concept and the purpose and need for action.
Page 2. Re: Geographic scope of the analysis. In response, NPS makes reference to the scope of analysis and range of alternatives involving only actions on national park lands. An analogous situation would be national forest planning documents and major actions – wherein the scope deals with forest lands and seldom discusses impacts on adjacent national parks to any degree. The decision to be made involves management on the three park units. We agree that effects of such decisions would be felt outside the park boundaries. Therefore, the DEIS evaluates effects on adjacent lands, including national forests, on pages 298-315, and it evaluates cumulative effects on pages 319-327. NPS believes the DEIS analysis is sufficient for the decision to be made. The information NPS had for these evaluations in the DEIS was in part dependent on information provided by the forest service (USFS), a cooperating agency. The biological assessment to be prepared and published along with the FEIS similarly includes areas of concern for wildlife beyond the park boundaries. NPS has invited the USFS to provide information for this assessment. Any additional information provided by USFS will merely strengthen the document.
Page 2. Re: Lynx. The appropriate terminology for lynx will be used in the FEIS. The biological assessment being prepared is finding the Conservation Strategy useful. Habitat has been mapped for the park units. NPS will include any additional information provided by the USFS about habitat, management and potential effects that might occur on national forests.
Page 2-3. Re: The species of concern list. NPS policy is to address species of concern for each park only. The list will be revised and clarified in the FEIS.
Page 3. Re: birds. NPS will utilize a species list provided by the USFWS as a basis for analysis on threatened, endangered and proposed species. The FEIS will be revised to reflect recent changes.
Page 3. Re: Bison. The bison analysis will be revisited, although a careful reading of the EIS provides the same perspective as that given in the comment. The winter use planning team and the bison planning team are coordinating as closely as possible to ensure that the two documents are consistent.
Page 3. Re: Bald Eagle. The Biological Assessment notes the forthcoming de-listing of the bald eagle, and the FEIS will be revised to include that information.
P.3. Re: Lynx habitat. A lynx habitat map for the parks will be included in the Biological Assessment, and the FEIS will be revised to include a discussion of lynx in YNP.
Pages 3-4. Re: Habitat/distribution for fisher, marten, otter, fish and amphibians. The FEIS will be revised to include information on the habitat and distribution of these species.
Page 4. Re: Sensitive plants. NPS policy requires an assessment of impacts be made for those species that are considered of special concern in the parks. Because the vast majority of plants are dormant during the winter season, the discussion of plant species of special concern was moved to "impact topics dismissed" in the FEIS. This is consistent with CEQ section 1502.15 which states "data and analyses shall be commensurate with the importance of the impact" and allows for other material to be summarized or referenced. A brief description of the Yellowstone Sand Verbena is included in the FEIS.

Page 4. Re: Need for citations. The material used as a basis for effects discussion is summarized and cited in Assumptions and Methodologies for Evaluating Impacts at the beginning of DEIS Chapter IV. For wildlife, this may be found on pages 165-170.
Page 4. Re: Analysis of lynx and grizzly bear habitat. The wildlife analysis will be updated for the FEIS, based in part on a biological assessment that evaluates T&E species for all 3 park units.
Page 4. Re: Impacts on sensitive species. The FEIS will be revised to include a discussion of impacts to species of special concern. The relationship between amphibians and winter use is discussed on page 190.
Page 4. Re: Effects on adjacent lands. The decision to be made involves management on the three park units. We agree that effects of such decisions would be felt outside the park boundaries. Therefore, the DEIS evaluates effects on adjacent lands, including national forests, on pages 298-315, and it evaluates cumulative effects on pages 319-327. NPS believes the DEIS analysis is sufficient for the decision to be made. The information NPS had for these evaluations in the DEIS was in part dependent on information provided by the USFS, a cooperating agency. The biological assessment to be prepared and published along with the FEIS similarly includes areas of concern for wildlife beyond the park boundaries. NPS has invited the USFS to provide information for this assessment. Any additional information provided by USFS will merely strengthen the document.
Page 4. Re: Analysis of plowed vs. groomed roads. The analysis of plowed and groomed roads in alternative B, which this comment addresses, refers the reader to impacts analysis for alternative A (pages 186-187). The description of the impact on those pages should clarify for the commenter how and to what degree plowed and groomed roads might impinge on pre-denning activities of bears. Also see the biological assessment's analysis of grizzly bears.
Pages 4-5. Re: Socioeconomic Data. The economic model will be run on the 5-county economy immediately affected by the parks. From that, sufficient comparisons can be made. NPS will consider providing more description of communities of interest.
Page 5. Re: Winter 1998-99 Visitor Survey in YNP, GTNP, and GYA. All surveys that are completed, including the nationwide phone survey and the summer visitor survey will provide information for the FEIS.
Page 5. Re: Carrying capacity. It is not possible to perform effective carrying capacity analyses for all alternatives in the time allotted. USFS has been provided with our best estimate of displaced use, based in part on the winter survey results. The Final EIS will incorporate mitigation in terms of interim recreation use limits for some alternatives.
Page 5. Re: Carrying capacity and adjacent lands. The national forests in the GYA all participated in an assessment of winter use under the purview of GYCC. The DEIS incorporated the multi-agency winter visitor use assessment by reference and cited it specifically under cumulative effects on forest lands (page 326). NPS encouraged the USFS to use that document as a starting point for effects analysis considering the possible displacement of use from the parks. Potential displacement is noted as an impact on national forests in Effects on National Forest Lands (DEIS pages 298-303).
Page 6. Re: Alternative A. This statement is reflected in the DEIS on page 298.
Pages 6-10. Re: Alternative B (proposed action) Much of the alternative-specific discussion on pages 6-10 of the letter is a restatement of material in pages 298-303 of the DEIS. Information from the letter that is not in the DEIS will be incorporated into the FEIS. NPS believes that the DEIS contains sufficient analysis of impacts on adjacent lands to support the decision to be made. In answer to comments about the lack of facts or certain impact analysis on national forests; the USFS is responsible under its cooperating agreement for providing such information to us. In response to comments saying that better analysis would be possible if NPS were to provide "an actual prediction of how many users and to where they might be displaced" (e.g., letter page 7), NPS would like to predict the future but feels it can't. NPS has provided to USFS an estimate, or a scenario based on answers from the winter use survey and current use statistics. USFS should know where its current problems, conflicts, and use levels are (Multi-agency WVUA). Other comments indicate that outfitters, et al, are prepared to market winter experiences on lands other than the parks – despite the dire predictions

that NPS management changes will devastate local economies. USFS is in a better position than NPS to create scenarios for future winter use in national forests near the affected communities. A good indicator would be winter recreation demand trends developed for forest plan analyses, and forest programs that have been developed in anticipation of that. As indicated in several places in the USFS letter, use on national forests (especially off-trail snowmobiling) is increasing each year. USFS should have some effects analysis in place that would be invaluable for dealing with the issue of increased use, no matter that the increase is due to displacement from the parks.

Relative to cumulative effects analysis, if there are other sources of impact occurring on forest lands that would be additive to the indirect effects of displaced (from the parks) winter recreation, then the USFS should provide that information. USFS best knows where these sources are and where any increased recreation use would occur – it is unreasonable to expect NPS to create such an analysis without the direct assistance of the USFS. Apart from that, NPS believes that the DEIS cumulative effects analysis is sufficient disclosure for purposes of public information and for the decision to be made regarding this programmatic action.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500 (8EPR-EP)
DENVER, COLORADO 80202-2466

DEC 15 1999

Clifford Hawkes
National Park Service
Denver Service Center
12795 West Alameda Parkway
Lakewood, Colorado 80228

Re: Draft EIS for Winter Use Plans, Yellowstone and Grand Teton National Parks and John D. Rockefeller Jr. Memorial Parkway
CEQ # 990340

Mr. Hawkes:

The U.S. Environmental Protection Agency Region VIII (EPA) has reviewed the draft environmental impact statement (DEIS) on the Yellowstone and Grand Teton National Parks and John D. Rockefeller Jr. Memorial Parkway. Our review of this project was conducted in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

Our review has identified several positive steps taken by the National Park Service (NPS) toward improved environmental conditions in the project area. Specifically, EPA supports the increased protection provided to wildlife winter habitat through road- and trail-use policies that limit off-trail non-motorized or off-highway vehicles (OHV) use in these critical areas. EPA also supports implementation of emissions and noise controls on OHVs in the project area to better protect against the on-going impacts to human health, air and water quality, and the scenic and aesthetic values for which these Parks were created. However, we stress that without restrictions on the number of vehicles, any environmental gains from improved engine technology could easily be negated by increased numbers and density of vehicles.

This DEIS includes extensive analysis of the effects from current winter use and that analysis demonstrates significant environmental and human health impacts. We encourage NPS to take the steps necessary to protect human health and the environment immediately rather than to depend on future regulation of OHV engines from EPA. We would like to point out that this DEIS includes among the most thorough and substantial science base that we have seen supporting a NEPA document. While any land management decision can benefit from having *more* data available, NPS clearly has the science-based information at hand to make a decision on this Plan that will protect both human health and the natural resources in these Parks.

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The remainder of our comments and recommendations on this DEIS will focus on three areas: air quality and human health effects from OHV emissions; deficiencies in the adaptive management provisions of the Plan; and compliance with Executive Order 11644.

First, EPA concludes that Alternatives A through F do not assure compliance with National Ambient Air Quality Standards (NAAQS) with respect to carbon monoxide (CO). The standard for CO is based on protection of human health. Despite data indicating existing significant impacts from CO in the Parks, this DEIS defers the decision on reducing human exposure to high CO levels in the Parks through "adaptive management" and through OHV emission controls that would not take effect until at least 2008. The NPS has available management tools that could address these impacts through *this* action including limiting numbers and density of OHVs in the Parks, and it is not clear why these or other measures are not being proposed in the preferred alternative.

Section 169(A)(a)(1) of the Clean Air Act (The Act) states that "Congress hereby declares as a national goal the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution." This DEIS describes man-made impairments to both air quality and visibility from winter use in the project area. The Act specifically delegates the responsibility to protect air quality and related values (visibility, odor) in Class I areas to the Federal Land Manager. The decision for this Management Plan *must* therefore be protective of Class I air quality and visibility standards and values.

Second, the adaptive management procedures included in Alternatives B and E are not well defined in this DEIS. EPA has included in the enclosed "Specific Comments" our detailed concerns and recommendations regarding the description and application of adaptive management for this action. We are concerned that the adaptive management process described in this action could unnecessarily result in the need for additional, costly NEPA processes and delayed environmental protection.

Finally, as referenced in the Purpose and Need for this action, Executive Order 11644 (as amended) states that off-road vehicles shall be permitted in National Parks "only if...that off-road vehicle use will not adversely affect natural, aesthetic, or scenic values." EPA has reviewed this DEIS in detail, and concludes that the analysis provided clearly and convincingly demonstrates current snowmobile use is indeed adversely affecting the natural (wildlife, air quality), aesthetic (noise), and scenic (visibility) values in these Parks. Further, Alternatives A through F presented in this document would result in continued adverse impacts to these resources from off-road vehicles. The DEIS specifically addresses resource impacts from the Alternatives A through F as "adverse" and "compromised." Ten of the eleven management prescriptions listed in Table 2 indicate that "visitor use may compromise resource values." The summary of effects in Table 4 indicate varying levels of "adverse" effects for each alternative with respect to public health, public safety, water quality, air quality, and wildlife. It is evident that Alternatives A through F in this DEIS would not comply with Executive Order 11644. E.O. 11644 therefore requires the NPS to restrict OHV use in these areas immediately to protect human health and Park resources.

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Based on impacts to human health, air quality, water quality and visibility, EPA has identified Alternative G as the "environmentally preferred alternative." Alternative G could easily be improved to be more protective of winter wildlife habitat by including the "areas of designated use" from Alternatives B, D and E.

Based primarily on the likelihood that this action will result in noncompliance with air quality standards and that air quality could negatively impact human health, EPA is rating the Draft EIS for Winter Use Plans, Yellowstone and Grand Teton National Parks and John D. Rockefeller Jr. Memorial Parkway as EO - 2 (Environmental Objections, Insufficient Information). "EO" indicates that the EPA review has identified environmental impacts including possible violation of environmental regulations that can and should be avoided in order to fully protect the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of additional project alternatives. The identified additional information, data, analyses or discussion should be included in the Final EIS (FEIS). A full description of EPA's EIS rating system is enclosed.

Because this action has the potential to exceed NAAQS, it is essential that EPA and NPS take steps to work together to assure that air quality and human health are protected in the near term and beyond through this project. We offer to meet with you and your staff to work these issues out between now and the publication of the FEIS. We appreciate the opportunity to review this project and provide comments. Thank you for your willingness to consider our comments at this stage of the process, and we hope they will be useful to you. Should you have any questions regarding these comments, you may contact Phil Strobel of my staff at (303) 312-6704.

Sincerely,

Cynthia Cody

Cynthia G. Cody, Chief
NEPA Unit

Enclosures

cc: Elaine Suriano, EPA Office of Federal Activities

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Specific Comments from the US Environmental Protection Agency (EPA) on the Winter Use Plans for Yellowstone, Grand Teton and J.D. Rockefeller Jr. Parkway DEIS

Air Quality

EPA is pleased that the NPS has recognized the air pollution problems occurring inside its National Parks. However, EPA is concerned that this Draft EIS contains alternatives which would continue to result in ambient levels of carbon monoxide that may exceed both the National Ambient Air Quality Standards and the State of Wyoming air quality standards. As stated on page 108 under Regulatory Overview, "The Act (Clean Air Act) gives Federal land managers the responsibility for protecting air quality and related values, including visibility, ..., and visitor health from adverse air pollution impacts."

Section 169(A)(a)(1) of the Clean Air Act states that "Congress hereby declares as a national goal the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution." In Appendix H under Air Quality Issues, the DEIS states "Some winter visibility effects have been reported in Yellowstone National Park, where snowmobile emissions resulting in a blue haze have been observed along the West Yellowstone - Old Faithful corridor." This visibility impairment and high levels of carbon monoxide are occurring inside the project area where the Federal Land Manager has a delegated authority under the Clean Air Act to protect air quality and related values.

Because proposed OHV emission reductions would take place no sooner than 2008, and because this EIS does not provide for limitation on the number of OHVs in the Parks, Alternatives A through F would not assure compliance with NAAQS. While the preferred alternative (B) will clearly and permanently improve air quality and visibility in the West Yellowstone to Old Faithful corridor, the management plan does not provide any assurance that the air quality problems in the remainder of the project area will improve. EPA encourages the NPS to consider in the development of this document, only those alternatives that would result in air quality that not only meets the NAAQS and visibility goals of the Clean Air Act, but also achieves a safety margin to ensure that these standards and goals are not exceeded.

Monitoring for nitrogen oxides (NOx) was not addressed in the DEIS. Given existing data on vehicle emissions and on visitor use, it should be possible to determine the levels of NOx likely to occur in these Parks. The Final EIS (FEIS) should include a NOx estimate (hourly, daily, and annual) and disclose how this level compares with the PSD Class I standard of 0.05 ppm for NOx.

The DEIS (pages 95, 108, and Appendix H) is not clear in describing where CO measurements were obtained and whether or not they meet certain siting criteria. Page 95 states that violation of NAAQS did not appear to occur, whereas Appendix H states that the Yellowstone's West Entrance CO monitoring meets or exceeds all applicable Clean Air Act criteria for micro-scale monitoring. We recommend that Table 14 on page 108 include a summary of ambient air monitoring results for Yellowstone National Park for a direct comparison to Federal air quality standards.

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The DEIS (page 177, Effects on Public Health) states, "If 2-stroke engine technology remains unchanged the impacts under this alternative will be adverse, and range from negligible to moderate depending on location." EPA is scheduled to propose emissions standards for OHVs late in 2000. A final decision on the standards is scheduled late in 2001. Should those standards be approved, it would be some numbers of years before OHV manufactures would be required to implemented the improvements. Again, it would be years after improved machines begin coming off the manufacturing lines before enough fleet turnover would occur to the realize expected environmental benefits. Given the impacts identified from current OHV emissions in the Parks, it is unacceptable to wait 10 or more years to reduce or eliminate the impacts.

Adaptive Management

Alternatives B and E are built upon a concept described as "adaptive management." Our review has identified several potential improvements in the adaptive process outlined in this document. In instances where the responsible agency can lay out thresholds and decision trees to guide future decisions, EPA supports the use of adaptive management. Without such thresholds and management options, adaptive management is not substantially different from traditional management. At its most powerful, adaptive management identifies future management *actions*, rather than management *processes*. True adaptive management can reduce the need for future NEPA actions, or at least reduce the scope of future NEPA decisions. We offer several specific suggestions with respect to adaptive management that should be included in the FEIS:

1) NPS should include threshold values that would be protective of air quality, visibility, aesthetics (noise), water quality, and wildlife impacts. These thresholds would represent the minimum desired conditions in the Parks. These thresholds would be the "trigger points" that would determine when additional management decisions (potentially including NEPA) are necessary. We believe that these thresholds can be set in this EIS based on existing information and the expertise of NPS science and management staff, and that there is no reason to defer the disclosure of threshold values to some later date. The only threshold that may prove difficult to determine due to lack of study might be "visitor experience."

2) Ideally, this management plan would not only identify the thresholds, but would also discuss and identify management alternatives and mitigation that would be implemented should a threshold be exceeded. Inclusion of thresholds and management alternatives in this EIS would reduce or eliminate the need for additional NEPA on this issue in the near future.

3) The FEIS should provide assurance that funding is available for the adaptive process including NEPA if needed.

4) The FEIS should include more detail on the proposed adaptive management process including the mechanisms for public disclosure of the analysis and the decisions. The roles of the NPS, other Agencies, independent science, and the public should be clearly stated. The FEIS should discuss the future decision points in this adaptive process that would require NEPA.

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The first bullet in the "Actions and Assumptions Common to all Alternatives" (p. 25) indicates that "visitor use capacities" are to be determined under each Alternative in this EIS. It appears, however, that determination of visitor capacity is not actually an action under *this* EIS but would be included as part of the adaptive management scenario, possibly under a future NEPA process. It is important that the determination of visitor use capacities be made by NPS, and be based on the best available science.

Water Quality

In our scoping comments, EPA expressed concern about water quality impacts from the deposition of OHV emission pollutants to the snow pack in the Parks. The DEIS identifies those potential impacts and indicates on-going monitoring to assure that pollutants are not adversely impacting natural resources in the Parks. EPA would like to suggests two specific areas of needed research in addition to those studies identified in the DEIS. First, because wetlands can act as sinks for non-point source pollutants, we recommend water quality and soil monitoring in wetlands adjacent to OHV corridors. Second, because amphibians are among the most sensitive receptors of pollution, we recommend study of amphibian populations, comparing OHV corridor area populations to populations in other areas of the Parks.

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U.S. EPA
Page 1. Re: Limiting off-trail nonmotorized or OHV use. Impacts analyzed in the DEIS will be indexed to road segments and vehicle-miles traveled on those segments, assuming there is a cause-effect relationship that can be demonstrated in that fashion. Natural sound and air quality are two resources for which the relationship exists; further modeling is being done in both areas. Given a demonstrated impact for certain alternatives, mitigation will be applied in the form of interim recreation limits – pending the completion of capacity studies that are features of all alternatives.
Page 1. Re: Significant environmental and human health impacts. Identified, immediate human health impacts clearly call for corrective action on the part of a park superintendent. This can be accomplished without any additional analysis. Cumulative impacts or impacts that take a long time to develop must be addressed in this and any programmatic plan. In terms of environmental impacts, NPS seeks through this analysis to determine the magnitude, extent, and duration of impacts and assess whether or not they are adverse in light of park mandates. NPS views this comment as an affirmation that levels of impact can be constrained by setting limits in alternatives, and further that NPS has the authority to implement such limits for the protection of park values and resources.
Page 2. Re: Compliance with NAAQS in CO. Please see previous response, "Limiting off-trail nonmotorized or OHV use." This analysis will focus impacts by alternative more in terms of location and intensity, compared to that in the DEIS. It will allow NPS to display where and under what circumstances the risk of violating standards exists. For two alternatives, B and E, this will put more of a perspective on adaptive management, and for all alternatives mitigation needs become clearer. With mitigation, including interim limits on vehicle numbers, the range of alternatives will overall appear more viable.
Page 2. Re: Section 169(A)(a)(1) of the Clean Air Act. Comment affirms NPS assertion, as part of the purpose and need for action, that it has an affirmative responsibility to protect air quality related values in national parks. Apart from the issue of air quality standards, which both EPA and the States play a role in, air quality is a park value that must be managed and protected.
Page 2. Re: Protection of Class I air quality. NPS agrees that if a use is determined to violate state or federal standards or impair resource values, NPS must act.
Page 2. Adaptive management procedures and monitoring as they apply to various alternatives will be defined better in the FEIS. NPS intends that sufficient detail will be included to allow for the articulation of related needs in the eventual decision document.
Page 2. Re: Adaptive management and costly NEPA process. Since the EIS and plan are programmatic in nature, implementation is likely to involve further NEPA. It should be noted that short-term measures for addressing impacts are available to NPS under its regulations (e.g. 36 CFR 1.5 and 2.18), using minimal NEPA. Longer-term measures such as setting carrying capacities will require more extensive analysis and public involvement. To address impacts that may occur before capacities can be determined, interim limits on use will be considered as mitigation.
Page 2. Re: Alternatives A-F not compliant with EO 11644. Using a more comprehensive analysis of effects, as indicated in earlier responses, an appropriate basis for mitigating alternatives' impacts will be evident in the FEIS. Mitigation choices will be available for the decision-maker to resolve possible noncompliance with mandates and executive orders. Since alternative G appears to meet such needs based on the DEIS effects analysis, it represents a target for designing mitigation in other alternatives.
Page 3. Re: EO. As stated in earlier responses, corrective (mitigation) measures will be applied within the range of alternatives – predicated on impact levels associated with alternative G. Such measures will be facilitated by additional data and analysis to be disclosed in the FEIS.
Page 3. Re: Last paragraph. NPS welcomes further coordination with EPA.
Page 4. Re: Impacts identified from current OHV emissions. Interim carrying capacities and other identified mitigation measures will be available as choices for the decision-maker to address this need.

U.S. EPA
Page 4. Re: Adaptive management. NPS appreciates the guidance on improving the EIS relative to adaptive management. NPS will provide more detail on the process as it applies to two alternatives. The FEIS will address decision points, public involvement, NEPA applications, and potential management actions. Adaptive management offers a programmatic process for management to address issues in the absence of absolute site-specific data and hard thresholds. It is also a process that could be used to develop thresholds. This will be explained in the FEIS. Re: EPA's suggestion that thresholds should be set in the EIS. The EIS conforms to CEQ regulations that require disclosure of the magnitude, extent and duration of direct, indirect and cumulative impacts. Though the setting of standards or thresholds of impact might be desirable, they might also be regarded as arbitrary without a far more exhaustive analysis. Some thresholds are imposed through limitations on sound or pollution emissions as a feature of an alternative. With reduced impacts in such alternatives, coupled with mitigation, it is reasonable to conclude generally (programmatically) whether or not an impact would be beneficial, adverse, unmeasureable, negligible, minor, or major. These disclosures set the stage for a decision-maker to judge the impact in light of mandates, executive orders, regulations and policies. In other words, it is left to the decision to find the significance of impacts –in context and intensity – in the absence of hard standards and incontrovertible data.
Page 4. Re: Adaptive management, Point 4.There is no mechanism whereby the FEIS can make such assurances. Costs accrue to each alternative in the range – and all are available for consideration of the decision maker. A decision could be based in part on cost, subject to the judgement that funds would not be available for implementation. This would need to be explained in the rationale. On the other hand, a programmatic decision can provide the basis for future funding requests – it is not practical to assure that funding is available for programs that will take place over the next 5 to 15 years.
Page 5. Re: Water quality. NPS has additional information available for the FEIS relating to snowpacks, water quality and aquatic resources. Needs for additional monitoring programs or studies will be indicated.

#0001

FLATHEAD
NATION

THE CONFEDERATED SALISH AND KOOTENAI TRIBES
OF THE FLATHEAD NATION
P.O. Box 278
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Joseph E. Dupuis - Executive Secretary
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TRIBAL COUNCIL MEMBERS:
† Michael T. Pablo - Chairman
D. Fred Matt - Vice Chairman
Carole J. Lankford - Secretary
Wm. Joseph Moran - Treasurer
Donald "Donny" Dupuis
Michael Durglo, Jr.
Jami Hamel
Mary Lefthand
Elmer "Sonny" Morigeau
Lloyd D. Irvine

November 9, 1999

Mr. Clifford Hawkes
National Park Service
Denver Service Center
12795 West Alameda Parkway
Lakewood, Colorado 80228

Received
NOV 16 1999
DSC-RP

Dear Mr. Hawkes:

The Confederated Salish and Kootenai Tribes (Tribes) of the Flathead Nation have received and reviewed a copy of the National Park Service's Winter Use Plan Draft Environmental Impact Statement (DEIS) for the Yellowstone and Grand Teton National Parks and John D. Rockefeller, Jr. Memorial Parkway (Parks). The substantial increase in winter recreational use of these areas is cause for concern. The following comments relate to Tribal concerns regarding the content of this document.

We believe that this process of consultation, as it relates to Indian tribes, is flawed. Federal Government agencies are required to consult on a government-to-government basis with tribes. Although the DEIS mentions consultation with tribes, this consultation has generally occurred after development of alternatives and the selection of the Preferred Alternative.

Our primary concern relates to adverse impacts of motorized winter use upon the natural and cultural resources within the Parks. The DEIS concentrates solely upon paving the way for increased winter use, rather than limiting winter uses for cultural and natural resource protection. There seems to be internal inconsistency between proposed alternatives in the DEIS and the agency's mandate under the National Park Service (NPS) Organic Act, which directs the agency to "protect park resources and provide for the enjoyment of those resources in a manner that leaves them unimpaired for future generations". The goal of the DEIS appears to be to facilitate more winter use in the Parks rather than protection of natural and cultural resources for future generations.

Grooming of roads for snowmobiles is resulting in changes in winter use by bison at Yellowstone. Migration of bison from the geyser basins has resulted in the shooting of

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† In honor of the years of dedicated service to the Tribes by the late Michael T. Pablo, the position of Chairman will remain vacant until January 2000, with the Vice Chairman assuming the duties as provided by the CSKT constitution.

Mr. Clifford Hawkes
November 9, 1999
Page Two

approximately 2,000 bison outside the Park to date. Although bison are discussed as an "important element of the ethnographic landscapes significant to American Indians" (page 132 of the DEIS), this process largely ignores the importance of bison in favor of human activities that are obviously detrimental to this resource.

Moose and other ungulates may also be adversely impacted by winter uses. This situation warrants a change in policy as it applies to road grooming. We strongly suggest that grooming of the roads be decreased near geyser basins and other areas at which wildlife impacts have been demonstrated.

A related issue in the document deals with the proposal for plowing roads. We strongly urge the National Park Service to remove this concept from the document. Once again, consideration of this idea seems to boldly contradict the role of the agency as a resource manager.

Although the impact of current winter uses upon forest carnivores is unknown, the potential for conflict and disturbance of Canadian lynx and wolverines exists. These animals avoid areas of human activity and disturbances. There is a need for closer evaluation of potential impacts upon these species.

Timing of use of the areas is also a concern with regard to its impacts upon wildlife. Wildlife is impacted in a number of ways by current winter use. Winter use occurs at a critical time in terms of wildlife movements, winter survival, and reproductive stress.

There is an additional conflict between wildlife and night use of park roads by snowmobiles. To alleviate this situation, banning snowmobile use between sunset and sunrise maybe an appropriate option. Such a restriction would result in a lower level of disturbance of wildlife and human visitors and should create a safer environment for both snowmobile users and wildlife by reducing the potential for collisions.

Given the ever-increasing amount of winter use within the Parks, it seems clear that the need exists for development of more stringent controls on the number of users and the timing of those uses. This process may provide an opportunity for the National Park Service to seriously examine re-distribution of winter use to better fit the natural and cultural resource management goals of the areas.

There seems to be an opportunity for the Parks to increase mass transit opportunities for visitors. Certainly, there are additional visitors who do not own or have access to snowmobiles who would like to visit the Parks during the winter.

The impact of snowmobile use occurring in the Parks is a serious concern. A real and growing problem exists due to the exhaust emissions of the number of snowmobiles that

Mr. Clifford Hawkes
November 9, 1999
Page Three

currently operate in the Parks. The impact of these emissions is a concern because of the Parks' designation as Class I areas under the Clean Air Act. The long-term cumulative impacts of emissions upon air quality and food and medicinal plants as cultural resources have not been adequately addressed.

Additionally, noise impacts have not been adequately addressed. Many tribal visitors come to Parks for solitude and pristine environment as part of a traditional cultural practice. Noise levels exceeding 60dB have indirect impacts on natural and cultural resources.

Regardless of the alternative that is ultimately selected, there is a compelling need to continue winter use and associated impact studies. These studies should be directed at a detailed analysis of direct, indirect and cumulative impacts to allow adaptive management strategies.

None of the alternatives listed in the DEIS thoroughly deal with the issues that are discussed above. Careful evaluation of each alternative and reconsideration of other alternatives not included is strongly suggested. To do less puts the National Park Service in a position of violating its own mandates.

We appreciate the opportunity to provide comments on the DEIS.

Sincerely,
Confederated Salish and Kootenai Tribes

D. Fred Matt

D. Fred Matt, Vice Chairman
Tribal Council

THE CONFEDERATED SALISH AND KOOTENAI TRIBES OF THE FLATHEAD NATION
Page 1. Re: Flawed consultation process. The National Park Service is committed to recognizing the past and present existence of American Indians in the region and the traces of their use as an important part of the cultural environment to be preserved and interpreted. Throughout the planning process the National Park Service invited American Indian tribes traditionally affiliated with the greater Yellowstone area (Blackfeet, Crow, Nez Perce, Northern Arapahoe, Northern Cheyenne, Confederated Salish and Kootenai, Shoshone-Bannock, Shoshone-Eastern Band, Assiniboine & Sioux, Cheyenne River Sioux, Crow Creek Sioux, Flandreau Santee Sioux, Gros Ventre & Assiniboine, Kiowa Tribe of Oklahoma, Lower Brule Sioux, Oglala Sioux, Rosebud Sioux, Sisseton-Wahpeton Sioux, Spirit Lake Sioux, Standing Rock Sioux, and the Yankton Sioux) to consult, as well as to participate in a general tribal consultation meetings. One such meeting was held at Yellowstone National Park on May 20, 1999, during which the Winter Use Plan/Environmental Impact Statement was discussed. Winter use was discussed at prior meetings, and at a subsequent meeting on April 26, 2000. The National Park Service will continue to consult with representatives of affiliated tribes as actions resulting from this plan are implemented, to insure that their interests and concerns are adequately addressed, as well as to develop and accomplish its future programs in a way that respects the beliefs, traditions, and other cultural values of the American Indian tribes who have ancestral ties to the area.
Page 1. Re: Increasing winter use is not consistent with NPS goals and mandates. There has been no legal finding through environmental analysis that motorized use adversely impacts park resources. The DEIS expresses the need to deal with the impacts of winter use, including motorized access, while continuing to provide opportunities in accordance with NPS mandates. Alternatives developed to meet this need all address issues regarding winter use. Over time, they are all intended to find a level of use (recreation capacity) consistent with resource needs and other visitors. If the variety of winter uses are found to have unacceptable impacts, management actions will be undertaken to eliminate or mitigate them. The FEIS will provide greater detail on the amounts of motorized use that might result from each alternative, as well as any needed mitigation.
Page 2. Re: Bison. The fundamental purpose of an EIS is to disclose impacts of a proposed action and alternatives to it. The possible impacts on bison for each alternative are disclosed in the DEIS.
Page 2. Re: Moose and other ungulates. The impacts on moose and other ungulates are disclosed in the DEIS. The possible impacts on wildlife expressed in the Final EIS will be considered before a final decision is made.
Page 2. Re: Proposed road plowing. NPS is required to evaluate the impacts of existing winter recreation use on park resources. NPS cannot do this and eliminate the concept of plowing from the EIS.
Page 2. Re: Canada lynx and wolverines. The impacts of winter use on lynx and wolverines are evaluated using the best available data for the park units. Note that for a programmatic EIS and plan, information does not need to be exhaustive nor reported in voluminous detail. Where additional information may be needed subsequent to the decision process, NPS will indicate a need for monitoring or programmed study.
Page 2. Re: Use and wildlife impacts. These impacts are reflected in the DEIS, pages 165-70, and in each subsequent alternative analysis.
Page 2. Re: Night use and wildlife impacts. Prohibition of snowmobile use during late night hours, from 11 P.M. to 5 A.M. and from sunset to sunrise, are features of various alternatives in the DEIS. These choices will be available to the decision maker through alternatives in the FEIS.
Page 2. Re: Number of users and use. Implementation of a recreation carrying capacity study is a requirement that would apply to all alternatives (page 23 in the DEIS). The FEIS will provide mitigation in some alternatives in the form of interim limits on motorized use.
Page 2. Re: Mass transit opportunities. Alternative G would increase mass-transit opportunities, as would alternative B using the plowed road access from West Yellowstone to Old Faithful.
Page 3. Re: Emission impacts on air quality. The direct, indirect and cumulative impacts of snowmobile emissions are disclosed in the DEIS by alternative. These analyses will be updated in the FEIS due to the completion of additional studies since the DEIS was published.
Page 3. Re: Impact of emissions on air quality and food and medicinal plants as cultural resources. As stated in the discussion of air quality monitoring on

page 109, "[a]ir pollutants (primarily from nitrogen and sulfur) may be deposited on terrestrial and aquatic resources through rain, snow, cloudwater, dryfall and gases and may affect resources such as vegetation and water chemistry." While the visible impacts (haze and odor) of snowmobile emissions upon air quality are usually short-term, depending upon the location and such environmental factors as wind, the long-term impacts of air pollutants on the environment and human health are less well known. Studies are underway to ascertain and understand such long-term impacts. The studies will help identify the long-term impacts of air pollutants on the parks' resources, such as vegetation, and provide insight into how the traditional use of such resources by American Indians would also be impacted The DEIS dismisses impacts on vegetation on pages 81-82. NPS will consider this issue further and provide adequate discussion in the FEIS.

Page 3. Re: Continued study of winter use impacts. As a result of the FEIS and the decision, additional monitoring, adaptive management procedures (if selected), and research needs will be identified.

Page 3. Re: Inadequate range of alternatives. "The primary purpose of an environmental impact statement is to serve as an action-forcing devise to insure that the policies and goals defined in the Act [NEPA] are infused into the ongoing programs and actions of the Federal Government (§1502.1)." "The range of alternatives discussed in an [EIS] shall encompass those to be considered by the ultimate agency decision maker (§1502.2 (e))." The purpose and need for action described in the DEIS is sufficiently broad to act as an action forcing tool. It is within the discretion of the decision maker to set the scope of analysis. Considering that motorized use in the Parks is an existing use, not a proposed use, it is logical to frame the purpose and need in terms that would include that use and facilitate an incremental investigation of the impacts of that use. To do otherwise would result in a narrow scope of analysis. The settlement agreement that resulted in a need to develop this EIS requires a comprehensive evaluation of winter recreation use – the presumption that only nonmotorized use should be considered in light of policy, law, regulation and existing use, is not appropriate.

NPS takes this opportunity to further address the complexity of alternative formulation in this effort. Many suggestions for alternatives or alternative features were made in the thousands of comments received. A great deal of criticism was leveled at the current range of alternatives because people did not like the way features were "mixed." At the same time, many people focused on features of alternatives that they liked, and features to which they were opposed. It is clear that for such complex issues there could be an infinite number of possible alternatives. CEQ states that in such instances, the agency need only consider a reasonable number of examples that cover the full spectrum of possible alternatives that meet the purpose and need (Question 1b, CEQ 40 Most-Asked Questions). What constitutes a reasonable range depends on the nature of the proposal and the facts in each case, where the proposal is at the discretion of the agency.

The final selected alternative that is to be documented in a record of decision may mix features from the range of alternatives evaluated in the final EIS. Such mixing can occur as long as the mixed features are consistent with one another, and as long as the features and their effects would not fall outside the range of alternatives disclosed in the EIS (§1505.1(e)). A finding as to that circumstance would be entirely appropriate in the record of decision, along with the rationale, should the selected alternative not precisely correspond with one of the "mixes" evaluated in detail. This material needs to be explained in a new FEIS section on the decision to be made.

DIRK KEMPTHORNE
GOVERNOR

December 15, 1999

Clifford Hawkes
Winter Use Plan
National Park Service
12795 West Alameda Parkway
Lakewood, CO 80228

Dear Mr. Hawkes:

Thank you for the opportunity to comment on the *Draft Winter Use Plan and Environmental Impact Statement (EIS) for Yellowstone and Grand Teton National Parks and John D. Rockefeller, Jr., Memorial Parkway*. Our comments are divided into two categories, process and specific issue.

Process

While Idaho appreciates the opportunity to be one of the cooperating agencies that is providing input to the draft EIS, this process has been frustrating at times. It is our general consensus that many of our objections and suggestions have been either neglected or ignored. We have been left with the impression that our involvement was tolerated by the National Park Service, rather than supported. On several occasions throughout the process, the Park Service has chosen to disregard the Memorandum of Agreement with the cooperating agencies in terms of sharing information and the time allowed for review of information. If the issues that have led to our frustration are addressed, we believe that similar processes can prove more productive in the future.

We have recently received and reviewed a copy of the Park Service's Tourism Policy, Director's Order #17, in which policy 4.16 states; "It is the National Park Service policy to establish a common understanding on what is needed to ensure adequate protection of those resources for present and future enjoyment and how this can contribute to sustainable park related businesses and economies". Upon review, it is obvious that there has been no "common understanding" established. With the selection of Alternative B, as the preferred alternative, it is clear that the National Park Service is in violation of its own policy.

Specific Issues

We are disappointed that the National Park Service selected Alternative B as the preferred alternative for the plan. Alternative B causes several significant environmental, social, and economic problems that the draft EIS fails to address.

Visitor Use and Access

Preferred Alternative B proposes to plow the road from West Yellowstone to Madison Junction and from Madison Junction to Old Faithful. This action would displace 70.8% of the snowmobile traffic in Yellowstone National Park. Alternative B's proposed action of plowing the road without any parallel trail for snowmobile use was supported by only 4.2% of respondents in your most recent winter survey. Ignoring the results of this survey,

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by selecting Alternative B as the preferred alternative, shows that the Park Service is interested more in serving its own desires, rather than the needs of park visitors.

The December 1999 issue of SnoWest Magazine, the West's leading publication on snowmobiling, rates West Yellowstone as the West's best. "...it's pretty hard to ride in the West and not be near a mountain range or two. But only one place has Yellowstone National Park in its backyard. This is one of the primary reasons West Yellowstone can make its claim of Snowmobile Capitol of the World." By eliminating snowmobile access at West Yellowstone, *Alternative B removes the very reason West Yellowstone is the Snowmobile Capitol of the World.*

The winter survey shows that plowing the road is a very unpopular action with winter visitors. Plowing will either displace snowmobilers to the North, South or East Entrances, or snowmobile visitors will decide not to visit Yellowstone. The EIS failed to analyze the impacts of displacing 70.8% of snowmobile visitors. The final EIS must research and analyze the impacts of displacing these visitors, and what effects those impacts would have on surrounding communities.

The draft EIS also failed to analyze the impacts of potential increased daily visitation to Old Faithful under Alternative B. Alternative B implements a mass transit system of 20-30 buses and a fleet of 45 fifteen-person passenger vans. Alternative B proposes to increase daily visitation to Old Faithful by almost 130% [Vol. 1, Page 218]. The final EIS must analyze the impacts of increasing daily visitation.

Visitor Experience

Alternative B has several major negative impacts to visitor experience. The first and foremost is plowing the road from West Yellowstone to Madison to Old Faithful. *Alternative B eliminates the Grand Loop experience for all winter visitors. The Grand Loop is an effective transportation system for dispersing visitors.* The elimination of the loop will also cause greater congestion at popular attractions. The EIS must analyze in further detail the effects of greater congestion at these attractions.

Additionally, plowing will create berms of snow that will detract from scenery viewing opportunities. Visitors will lose personal freedom to stop and view attractions or wildlife along the trail at their own pace because of the implementation of the mass transit system.

Furthermore, plowing the West Yellowstone to Madison Jct. to Old Faithful road eliminates Idaho's own version of the "Grand Loop". The ability to originate in Idaho and loop through the John D. Rockefeller, Jr. Memorial Parkway and Yellowstone National Park is contingent on these trails. The 1994-5 Idaho Winter Sports and Recreation survey by the University of Idaho indicates that looping trail systems add to the quality of experience for 88% of the snowmobiling public.

The North, South, and East Entrances do not have the infrastructure to support a large displacement of snowmobile visitors from the West entrance. These entrances do not have the lodging facilities, rental facilities, or fuel facilities necessary to support a large increase in snowmobile activity. The plan fails to note that moving the snowmobile traffic from West Yellowstone to the other entrances has the potential to increase the use on the snowmobile trails leading from the North, South, *and East Entrances. An increase of use will require more* frequent grooming of the trails, or trail conditions will deteriorate. The Final EIS must analyze the impacts that these deteriorated trail conditions will have on the winter visitor experience.

Alternative B will also eliminate some ungroomed non-motorized trails between Lewis and Shoshone Lake. The State of Idaho is opposed to the elimination of these opportunities. The NPS should be looking for more ways to provide non-motorized travel away from main motorized routes. The plan should provide for expanded non-motorized opportunities, not fewer, in order to reduce conflicts between motorized and non-motorized visitors. A perfect way to expand non-motorized trail opportunities would be to create groomed routes within the interior of Grand Teton National Park along the Teton Park Road and the Moose-Wilson Road.

Air Quality

Another problem with Alternative B is the requirement that snowmobile emissions must be substantially reduced (hydrocarbons by a minimum of 70%, particulates by 75%, and Carbon Monoxide by 40%) by the winter of 2008-2009. Current technology does not provide a mechanism for a two-stroke engine to meet this requirement. This requirement would force snowmobile manufacturers to produce a four-stroke engine, which would make snowmobiles heavier, less responsive, and harder for the average person to handle.

Emission standards are only one way to address air quality concerns associated with public health. Another way to reduce emissions is to require all commercial snowmobile operators to use bio-base fuels and lubricants. Concessionaires within the park should also be required to sell bio-base fuels and lubricants. This action would affect 70% of the snowmobiles that travel to Yellowstone National Park.
Additionally, requiring all west gate entrance passes to be pre-purchased at local outlets, or at the Public Lands Information Center in West Yellowstone, would improve air quality at the Park entrance.

The Environmental Protection Agency is currently developing emission standards for all off-road engines, including snowmobiles. There is no need for the NPS to set emission standards, when the EPA process will provide us with national standards for snowmobiles in the near future.

Snowmobile Sound

The assumption for instituting draconian sound measures for snowmobiles under Alternative B is flawed. The draft EIS assumed that snowmobiles must have the sound at or below 78dbA at 50 feet (the requirements set forth in 36 CFR 2.18). The flaw in the assumption is that 36 CFR 2.18 requires that snowmobiles be operated at full throttle, but most snowmobiles are not being operated at full throttle. More research on snowmobile sound within the parks is needed before regulations are developed.

Additionally, Alternative B is likely to increase sound in some travel corridors within the park. A tour bus with a diesel engine creates 80 decibels of sound at 50 feet going 40 mph. The sound frequency of automobiles and buses is lower than the sound frequency of snowmobiles, so the sound of buses and automobiles travels farther than the sound of snowmobiles. The EIS must further analyze the sound impacts of buses and automobiles.

Human Health and Safety

Alternative B will pose several problems with safety, the first being the reduction of snowmobile routes. This reduction will create additional traffic on the remaining snowmobile routes, which will cause trails to deteriorate. Additional moguling makes a trail more difficult to travel and poses an increased risk for snowmobile accidents.

Plowing the road between West Yellowstone and Old Faithful will create large berms that will funnel wildlife down the road towards either Old Faithful or West Yellowstone, and will lead to increased numbers of ungulates exiting the Park at West Yellowstone. This situation raises several issues that are of serious concern. First, there will be an increased likelihood of collisions between buses, vans, trucks, and wildlife as ungulates are confined to the roadway by the berms. Collisions between wildlife and wheeled vehicles in Yellowstone National Park are already greater by a factor of 3 to 1 over snowmobiles. Second, bison that get caught between the berms and end up in either the parking lot at Old Faithful or the streets of West Yellowstone will pose a substantial risk to public safety. Additionally, those bison that exit the Park at West Yellowstone will increase already serious disease control issues.

Alternative B will also decrease safety in another aspect. Plowing the road from West Yellowstone to Old Faithful will draw more nontraditional winter visitors, who may not have the appropriately equipped vehicles or the driving skills to handle winter conditions in and around the park. The Idaho Department of Transportation reports that the 45.05 miles of US-20 from the north side of Ashton to the Idaho State line for the 3-year period 1996-98 average traffic count was 4,523 during the summer months and 1,808 during the winter. There were 59 accidents recorded in the summer months and 111 in the winter months for the 3-year period. This calculates to 0.63 accidents per million vehicle miles for the summer and 2.13 accidents per million vehicle miles in the winter. Alternative B will create greater public safety concerns for personal property and injury.

Economic Impact

Alternative B contains very little economic impact analysis of how this management plan would impact the surrounding communities and the Greater Yellowstone Area. This obviously needs to be considered and should have been presented by the Park Service.

As an Example, implementation of Alternative B will eliminate Idaho's version of the "Grand Loop". This particular trail (from Ashton, Idaho to Flagg Ranch to West Yellowstone and back to Ashton) has a direct positive impact on the economy of Ashton, and all of Fremont County Idaho. Termination of this much utilized trail will exacerbate the economic difficulties of a community and county already depressed by reductions in resource based industries. Additionally, the inability to disperse snowmobilers along this route through the National Parks may require more frequent grooming in Idaho, which will necessitate the expenditure of additional funds by Fremont County and the state of Idaho. Further analysis must be completed regarding Alternative B's impact on the economy of Ashton, Idaho and Fremont County.

Furthermore, plowing and sanding the road from West Yellowstone to Old Faithful will have very high costs (potentially $20,000 per mile). The survey data, which show the "estimated median willingness to pay for the plowing to be $6.14 per person", indicate that other sources of revenue will have to be tapped by the Park Service just to keep the road open.

Natural Resources

Alternative B plows an additional 30 miles of road, which causes increased habitat fragmentation for wildlife by creating barriers to movement of ungulates. This includes structural barriers formed by snow berms created by the plowing operation. These snow berms will block or seriously disrupt traditional wildlife movement patterns, including access to traditional wintering areas.

The plowing action will also require sanding of the road surfaces. Much of the road between West Yellowstone and Old Faithful is located in riparian areas. Sanding will cause an increase in sediment deposited in springs, streams and rivers, some of which are habitat for species that are proposed for protection under the Endangered Species Act. The final EIS must address the potential impacts from this increased sedimentation.

Conclusion

As currently written, none of the alternatives in the Draft EIS are acceptable to the State of Idaho. The preferred alternative in the Final EIS must address a number of issues including the following:

- Adaptive management- an adaptive planning approach that allows the results of new and ongoing research and monitoring to be incorporated after it is has been subjected to peer review. In order for land management plans to be successful, a plan must be adaptable to new information and changing conditions. The Yellowstone ecosystem is not static; it is constantly changing. These changes need to be monitored, and the plan should be changed when information indicates the need for change.

- Viability of local park-dependent businesses- the well being of the rural economics that have grown dependent on winter visitors to Yellowstone National Park must be taken into consideration in the final plan.
- Natural Resource and Wildlife protection- the final plan must adequately address wildlife and natural resources concerns using sound peer reviewed science.
- Enhancement of visitor experiences- the NPS should attempt to expand recreational opportunities not limit them.

For these reasons, the State of Idaho does not support the alternatives presented in the Draft EIS. Idaho's concerns, however, are adequately addressed by the proposals submitted by the states of Montana and Wyoming, and would recommend the adoption of either of those proposals.

Sincerely,

Dirk Kempthorne

DIRK KEMPTHORNE
Governor

Page 1. Re: NPS Policy. NPS has been clear about its decision-making authority throughout the process. The cooperating agencies have concurred that the final decision lies with the park service. CEQ Regulations do not stipulate the rationale for selecting a preferred alternative in an EIS. It stipulates that in a final EIS, a preferred alternative must be identified. The statement of preference for one or more alternatives in a DEIS is discretionary, depending upon whether the agency has a preference at that point (§1502.14(e)). The identification of a preferred alternative in a DEIS should be regarded by the public as extremely tenuous. This is because an EIS is to serve as a means of assessing impacts of proposed agency actions "rather than justifying decisions already made" (§1502.2(g)). The FEIS preferred alternative may be viewed more as a "precursor" decision, which will only become final in a Record of Decision that expresses the rationale for the choice. In any case, it is clear that merely the expression of a preferred alternative, by itself, does not invalidate the EIS analysis. The decision-maker can select any of the options provided in a Final EIS by weighing the effects analysis alongside law, policy and regulation.
Page 1. Re: Visitor use and access. Alternative B responds to issues and resource needs associated with the current management situation. As with the other alternatives, there are consequences associated with it that are disclosed in the EIS. Other alternatives in the EIS provide for continued snowmobile access from West Yellowstone. All alternatives remain available in the range of choices for the final decision.
Page 2. Re: Eliminating snowmobile access at West Yellowstone. As with the other alternatives, there are consequences associated with it that are disclosed in the EIS. This alternative will remain in the range of choices available to the decision maker.
Page 2. Re: Plowing displacing snowmobilers to the North, South, or East Entrances. On the one hand, cooperating agencies have expressed the notion that some alternative features, e.g. plowing the road from West Yellowstone, will devastate local communities because snowmobilers will no longer come. On the other hand, they express the notion that snowmobiles will be displaced to adjacent lands outside the national parks. These notions are inconsistent. In responding to legitimate concerns about both topics – economic impacts and impacts on adjacent lands – NPS will develop scenarios of how management changes might affect use. NPS wishes to note that this is an exercise covered in CEQ regulations (§1502.22(b)(4)), wherein a theoretical approach may be taken to evaluate impacts that are reasonably foreseeable.
Page 2. Re: Potential increased daily visitation to Old Faithful under alternative B. Commenter is concerned about devastating the local economy (at West Yellowstone), yet implies that day use originating from West Yellowstone will overrun Old Faithful. In alternative B, NPS illustrates that plowing the road from West Yellowstone to Old Faithful can provide opportunities for the same number of people that presently use the route using snowmobile and snowcoach access. This is evaluated in the DEIS on pages 217-218, partly in response to the pre-DEIS issue that plowing the road could not allow access for the current number of visitors.
Pages 2-3. Re: Visitor experience impacts under alternative B. The DEIS discloses the visitor experience and access impacts of alternative B, pages 217-223.
Page 3. Re: Air quality under alternative B. Industry has not been highly responsive to the environmental issues relating to 2-stroke engines. NPS feels it is possible for industry to develop and implement suitable technology for cleaner and quieter machines, especially if it has 8 or 9 years to do it. EPA and NPS are concerned about allowing this amount of time for snowmobiles to operate and continue producing at pollution current levels. The use of less polluting fuels and oils is a feature of several alternatives. Pre-paid passes have been implemented as an interim measure to protect the health of park employees and visitors at the gate. However, not all people avail themselves of this service, and much is given up in the way of necessary visitor contacts when people use the service.
Page 3. Re: The EPA is currently developing emission standards for all off-road engines, including snowmobiles. EPA indicates that NPS should proceed with alternative features that are designed to improve air quality to the extent that it is expected in national parks. EPA notes that it is within NPS authority to manage air resources, and that in fact NPS has the affirmative responsibility to do so under the Clean Air Act.
Page 3. Re: Sound. Sound that is emitted by current snowmachines is an issue, in terms of its impacts on the natural soundscape and on other visitors. Clearly, one alternative to the current situation is to reduce the allowable sound produced by snowmachines. Industry plays a role in that it is technologically possible to reduce snowmobile sound.

Page 3. Re: Sound analysis. NPS will improve its analysis of sound for the FEIS, including sounds emitted by other forms of transport.
Page 3. Re: Additional moguling makes a trail more difficult to travel and poses an increased risk for snowmobile accidents. Changes in use will be evaluated more thoroughly in the FEIS, by virtue of a reasonably foreseeable impact analysis for each alternative.
Pages 3-4. Re: Safety concerns about the plowed road section in alternative B. NPS is aware of inherent risks associated with winter driving either on plowed or groomed routes. This rationale would apply to every road or groomed route in the GYA. Safety concerns and potential impacts of alternative B are discussed on page 203 of the DEIS. There would be sections having relatively high berms, but in our judgment there would be no significant difference from a visual and safety standpoint between this road segment and the road between Colter Bay and Flagg Ranch or other plowed roads in the GYA. Plowing the road will not increase "serious disease issues" associated with bison. In alternative B, most new or "nontraditional" users of a plowed route would access Old Faithful by mass transit vehicle, not by personal transportation.
Page 4. Re: Economic impact. Economic analysis is being updated for the FEIS, including the use of the economic impact model for the 5-county area surrounding the parks, as requested by the cooperating agencies.
Page 4. Re: Plowing and sanding costs. The cost of all alternatives, relative to the cost of current management was disclosed in the DEIS, Appendix F.
Page 4. Re: Impacts of alternative B on wildlife. The effects of Alternative B, including impacts of plowed and groomed surfaces on wildlife, are disclosed in the DEIS pages 208-214.
Page 4. Re: Impacts of sanding road surfaces. Sand removal for this purpose is a standard practice for routes that are plowed.
Page 4. Re: Adaptive management. Adaptive management is an alternative feature that will be in the range of choices for the decision maker. Commenter's note that plans must be adaptable for changing conditions is correct. That is in part why NPS engaged in an EIS process to produce a "programmatic" plan, rather than a project level, site-specific plan. The decision maker will consider all FEIS alternatives and their effects on local economies, visitor experience, and natural resources before making a decision. The consideration of these factors, and the rationale for selecting an alternative will be explained in the record of decision.

OFFICE OF THE GOVERNOR
STATE OF MONTANA

MARC RACICOT
GOVERNOR

STATE CAPITOL
HELENA, MONTANA 59620-0801

November 30, 1999

Clifford Hawkes
National Park Service
12795 West Alameda Parkway
P.O. Box 25287
Denver CO 80225-0287

Dear Mr. Hawkes:

Attached are the comments and other materials the State of Montana is submitting for consideration by the National Park Service for the Winter Use Plan, Draft Environmental Impact Statement for Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr. Parkway.

Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway, are important to our state. They are unique areas, designated by the federal government, with special purposes. They provide Montanans, as well as visitors to our region, with opportunities to observe breath-taking scenery, countless wildlife species and spectacular geothermal features. All of these valuable assets are made even more unique when viewed in the dead of winter.

In 1997, we requested, and were granted, cooperating status under the National Environmental Policy Act (NEPA) for the Winter Use EIS process. It was the first time, in our knowledge, that states and counties were granted this important designation under these circumstances. It was a recognition that these parks and parkway are a part of our states and counties and that decisions made on the management of these resources should be done in consultation with state and county officials.

Ever since that time, we have been engaged with the Park Service on this project. We had great hopes that cooperating status would mean cooperation among state and federal agencies. Unfortunately, this has been a frustrating process for state personnel. Not only has the cooperation been less than we had hoped for, specific concerns we have raised have not been addressed.

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Page 2
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The DEIS contains seven alternatives, with Alternative B identified as the National Park Service's preferred alternative. Unfortunately, in our view, neither Alternative B nor the other alternatives we feel protect the valuable resources of the Parks and Parkway and recognize the importance of the communities surrounding these resources. For this reason, we cannot support the adoption of the National Park Service's preferred alternative.

Instead, after careful analysis, we are proposing an alternative based on adaptive management for air quality and wildlife management. Our preferred alternative emphasizes the protection of wildlife and other natural resources while allowing park visitors access to a range of winter recreation experiences. It uses an adaptive planning approach that allows the results of new and ongoing research and monitoring to be incorporated

The Montana preferred alternative also includes the creation of an advisory committee to make recommendations to the Park Service with regard to the research, monitoring and other activities designed to make adaptive management successful. In addition, the advisory committee will make recommendations and foster partnerships between local communities, interested parties and the National Park Service.

As a part of the advisory committee, a technical subcommittee will make recommendations about adaptive management studies, standards for addressing mobile emission and sound issues. Local, county, state and federal agencies, as well as representatives from the snowmobile industry, local communities and environmental groups, would participate on a local subcommittee with the goal of increasing partnerships between all.

We hope the National Park Service will give careful consideration to this alternative.

In addition to the comments submitted, we would like to offer some general comments with regard to three specific issues: the defined purpose and need for the document, the effects the preferred alternative and others would have on bison out-migration, and impacts on air quality.

First, unfortunately, the document is based on a "purpose and need" which is difficult to understand. The document states that "The need to develop a Plan is indicated by the difference between desired conditions and existing conditions." However, the desired conditions are very difficult to determine. In fact, the document contains information about existing users desired conditions which contradicts what is proposed in the document. It states, "Plowed roads and snowcoach-only travel had very low support from the majority (>90%) of winter visitors surveyed. Most winter visitors highly valued the winter experience in the parks and feel it is a special and unique experience" (page 196). This winter use value, held by the American Public, is contradictory to the preferred alternative and comments in Chapter I.

Clifford Hawkes
Page 3
November 30, 1999

In addition to the possibility that the proposed preferred alternative does not fit the "desired conditions" of the general public which is the purpose and need for the document, we believe it will lead to greater Yellowstone Park bison out-migration. The document does not adequately explain the impacts plowing the road from Old Faithful to West Yellowstone would have on that out-migration. Our comments include studies concluding there would be increased out-migration as a result of plowing. The State of Montana has worked diligently within the framework of the Interim Bison Management Plan to reduce the need for lethal removal of bison due to the presence of brucellosis. We are deeply concerned that the National Park Service would propose a plan that would increase drastically the potential of removing bison. If bison remain within the Park, management options remain solely within the National Park Service's discretion. However, once bison leave the Park, the requirements of the Interim Bison Management Plan must be observed.

Last, there has been much discussion about air quality. Air quality in West Yellowstone and inside Yellowstone National Park is a concern because of carbon monoxide and particulate emissions from snowmachines and their resulting impact on ambient air quality, visitors and employees. We believe that there are technological solutions to reduce these emissions in both the short term and long term. Short-term solutions include stronger efforts to encourage the use of ethanol blend fuels in all gasoline vehicles, and low emission, biodegradable lubrication oils for 2-stroke engines in and outside the Park. This measure could be combined with eliminating the stopping and starting at the entrance into the Park from West Yellowstone by the use of express lanes during peak morning hours. Longer-term solutions include the use of new technologies in snowmobiles, especially the expected development of electric snowmobiles in the next 3-8 years, and moving the kiosk to an area where air movement is better. The short-term solutions need to be implemented now, for the 1999-2000 winter season as well as included in the EIS. Longer-term solutions to air quality concerns need to be implemented as soon as they are feasible.

The DEIS confuses data collected for personal exposure measurements (50 PPM) to the ambient air quality standards. The Montana Ambient Air Quality Standard (MAAQS) 1-hour maximum CO standard is 23 ppm as monitored according to the standard. The DEIS incorrectly states that MAAQS have been exceeded and violated. If MAAQS had been exceeded, it would have triggered a process to correct the situation. However, Montana is very concerned that the MAAQS may be exceeded soon because ambient air quality monitored last winter came within 90-percent of the standard. Corrections need to be made throughout the document on this issue and details are provided in the comments. Also, the federal government has delegated authority over federal air quality standards to Montana, and therefore decisions regarding air quality need to be made in conjunction with Montana officials.

In closing, we believe that cooperation can lead to an alternative which meets the needs of the people who visit our special corner of the world as well as protect the resources recognized by the federal government.

Sincerely,

MARC RACICOT
Governor

Enc. (comments, air quality modeling, Montana Preferred Alternative)

COMMENTS ON DEIS

SUMMARY

IMPACTS
Page ix and x, Table s-1

Page xiii, Table S-2, Alternative A and C, "Class I designation': Please remove the reference to Class 1 airsheds because these parks are designated as Class 1 in the statute. The way it is now stated implies that the Parks can loose this classification.

CHAPTER 1 – PURPOSE AND NEED

INTRODUCTION AND BACKGROUND
Pg. 2, second paragraph. Winter Visitor Use Management: The DEIS does not adequately describe the current winter use relationship between the greater Yellowstone area (GYA) and the parks. Furthermore, the lack of a clear management relationship between these land segments does not allow for the formulation of mitigative strategies for outcomes outside the parks produced by those alternatives A through G listed in the draft EIS. The proposed alternatives in the DEIS may have an adverse effect on those strategies and desired outcomes developed in the Greater Yellowstone Coordinating Council's (GYCC) "Winter Visitor Use Management" document. This land relationship is missing in the DEIS

PURPOSE AND NEED FOR ACTION
National Park Service Mandates
Pg. 3, paragraph 4: How does this executive order apply with the use of an existing interior park roads? What significant impacts are there to this travel corridor, which is historically and significantly impacted on a daily basis nearly 365 days a year? Additionally, winter motorized use in the parks is confined to a specific travel corridor versus non-motorized use that is dispersed. What impacts have there been from off trail use of snowmobiles

or summer vehicle travel, defined by the executive order? By plowing the road impacts may very well increase, not decrease. This can be partially based on comments submitted later in this document as to movement of wildlife along a tunnel, emissions trapped within the tunnel, ETC. If one examines the statement from the executive order ("off-road vehicle use will not adversely affect natural, aesthetic, or scenic values") what is the difference of impacts on these resource by snowmobile use and that of summer vehicle use along the road corridor? Without substantiated data of impacts to the stated resource values, how can NPS select or propose alternative based on this order?

Desired Conditions
Page 4, Last bullet: Last bullet: We recommend that NPS replace the words "Snowmobile emissions" with "Over-snow vehicle emissions." Emissions are not just from snowmobiles, and eliminating snowmobile emissions may not entirely solve air quality concerns. For example, emissions also can be reduced by changing the engines in pre-1971 vintage snowcoaches (that produce about 1,000 grams CO per mile) with newer engine technology having emissions controls when engines are replaced every 2 to 5 years. Page 27 has the proper reference.

We also recommend NPS replace the word "noise" with "sound".

Existing Conditions
Page 4, Existing Conditions: The discussion on Existing Conditions contains many statements which are beliefs. This should be more clearly explained to the reader or changed to be qualitative. For instance, under Visitor Issues, is the conflict between user groups or individuals a real conflict or is it perceived by some? Also, under Resources, do "many people" expressing concern mean the problem exists? These concerns may or may not be valid.

Also, how do these comments relate to the survey statistics referenced in the DEIS of the DEIS? On page 196, under The Availability of Access to Winter Activities or Experiences, it states that information is given indicating that (>90%) of the winter users surveyed expressed support for maintaining groomed trails within the park boundaries. While winter users responding to this survey are not the only indicators which should be used, it is a vital piece of information. This winter use value, held by the American Public, is contradictory to the preferred alternative and comments in Chapter I.

Page 7, Facility Issues: It should be within the scope of this EIS to consider the parks' infrastructure needs. The NPS and Congress have failed to adequately meet facility maintenance needs over the past several decades. The EIS should consider limitations on the parks' infrastructure. This is a programmatic EIS, and therefore appropriate to consider such issues.

BRIEF DESCRIPTION OF THE AREA
Climate
Page 8, Fifth paragraph: This paragraph should reflect that lodging and services are

provided 365 day a year in the surrounding communities.

CONSULTATION AND COORDINATION

Cooperating Agencies

Page 9, The comments are too limited. The MOA signed between the State of Montana and NPS, which appears in Appendix I states: "The State of Montana's special expertise is in the areas of socioeconomic effects, impacts on wildlife and recreational snowmobiling, as well as in the areas of environmental quality, including air and water quality issues."

SUMMARY OF PUBLIC COMMENT

Page 12, second table, Park Infrastructure and Operation, first row, Gasoline storage capacity: The comment refers to the limited amount of fuel storage in the interior of the Park. Alternatives B and G may not be valid alternatives because shuttles, snowplows, and snowcoaches would consume more fuel per mile than the current fleet of visitors. An effort would need to be made to ensure most of shuttles and/or snowcoaches enter the park with full fuel tanks.

MAJOR ISSUES

Air Quality

Page 14, First sentence: Studies during January and February 1999 at the West Entrance shows that the emissions are produced by snowcoaches, groomers, and drift from vehicles in town in addition to snowmobiles. The term "snowmobiles" is too limited and should be replaced in this sentence with "over-snow motorized vehicles."

Page 14, last sentence: "...emitted by snowmobiles on water quality was also a concern...." We recommend the document provide water quality comments with their own heading/paragraph as in other parts of the document. Otherwise, it appears air quality specialists are determining the impacts on water quality, which is a separate issue.

Human Health and Safety

Page 15, First bullet: The statement refers only to snowmobile emissions and noise, and needs to be more inclusive. We recommend that the first bullet read "The effect of motorized vehicular emissions and noise on employees who are required to work in areas with high traffic levels." All types of vehicles including snowcoaches, and in-town automobiles, trucks, and busses, produce pollutants. During winter conditions, these pollutants do not readily disperse as they do in the summer. The current bullet wording may lead a reader to believe that elimination of snowmobile emissions alone would eliminate the air quality problem, when in fact, the poor air quality may remain with any motorized vehicular emissions in a given area during winter conditions.

Sustained high levels of noise from vehicles may also compound the problems with emissions. For example, studies have identified that high levels of noise increase blood pressure. Increased blood pressure would exacerbate the effects of carbon monoxide (people would have more symptoms of CO poisoning at lower CO levels when blood pressure is higher). Effects of other pollutants might be similarly affected.

Natural Resources

Page 15, Bison are removed under the federal-state Interim Operating Plan due to the bison originating from a brucellosis-exposed herd. The statement made does not disclose the issue to the public. Also, in recent years, bison have been removed from the Stephens Creek facility which is on NPS property.

ISSUES OR CONCERNS NOT ADDRESSED IN THE PLAN / EIS

Summer/Winter Use Comparisons

Page 16, The comparison should be made so that analysis can be completed on whether there has been changes to the facilities in the parks, changes in the travel corridors and changes in the fees charged to enter the Park.

EIS Process

Page 17, Scientific Methods and Data: The document does not fully disclose impacts that may ocur in the GYA, as a result from the EIS's alternatives, including the preferred alternative. The GYCC's Winter Visitor Use Management document with its strategies and desired outcomes maybe jeopardized by alternatives included within this DEIS.

CHAPTER II

ALTERNATIVES, INCLUDING THE PROPOSED ACTION

ALTERNATIVES

As a general comment, under this analysis why is it that the GYA is not incorporated into the formulation of the alternatives?

Page 23/24, Table 2, Management Prescription Zones, -Resource Condition or Character: The terms "good to excellent air quality" are not defined. It would be more appropriate to speak in terms of air quality degradation resulting from the Management Prescription compared to the current condition. We would recommend changing "good to excellent air quality" to "Reduced air quality degradation" or "improved air quality" for zones 2-7, "No impact on Air Quality" for zones 8-11 to the "maximum allowed by law (approaching exceeding the NAAQS) for zone 1."

Page 23/24, Table 2, Visitor Experience, Zone 2 Plowed Road: If snowmobiles were replaced with busses and automotive traffic, the vehicle exhaust might not "provide a sense of being in a natural park environment." For this zone, many of the visitors would travel by shuttle or personal vehicle, while others would travel by snowshoe and ski. The dispersion of emissions is typically worse in winter than in summer. Persons exposed to trapped levels of exhaust in and around roadways might not have the experience the sense of being in a natural park environment. Complaints of soot and odor from tourist busses and Park Service maintenance equipment have occurred in the past, and need to be considered in any alternatives.

Actions and Assumptions Common to All Alternative

Page 25, First bullet: The methods for determination of visitor use capacities should be more specific. Do indicators and/or standards for desired visitor experiences and resource conditions exist, or is there a need for additional studies and research? The EIS should disclose the study design, monitoring procedures and standards. The study design and monitoring would be common to all alternatives. However, each alternative could imply a different visitor experience and a different balance between visitor experience and resource conditions. Thus, the EIS should develop standards specific to each alternative. Experts from cooperating agencies should be involved in the format and procedures for any necessary future studies and research.

The MOA states that the Lead Agency (NPS) will be "sharing and exchanging models, data, and other information, in their possession now or when developed, relating to affected resources and environmental impacts and mitigation relating to the proposed action and its alternatives in the EIS." To date, we have not received such information, including information on visitor use capacities. This is vital in our efforts to fully comment on the DEIS.

Alternative G

Page 36: Actions Common to All Three Park Units, first bullet: It appears the standards to be applied to snowcoach vehicles are more strict than other vehicles (plows, groomers) maintaining park trails. These appear to be more strict than EPA standards, and would require remote sensing or another monitoring method to verify compliance. The remote sensing method of emissions monitoring evaluates a pollutant based on a percent difference rather than a mass measurement per unit of power as used by EPA. To get pollutant mass from a percent reading, assumptions must be made. For example, assumptions as to the miles per gallon of the vehicles may not be accurate. Further, vehicles like vans, plows, and groomers may use an engine in compliance with EPA certifications based on a mass of pollutant per unit of power evaluation, but may not qualify for use under the proposed NPS regulations. For example, a high power van engine could produce a higher amount of CO in the exhaust even though it meets a mass/unit power EPA requirement. The remote sensing unit would see a higher percent difference of CO due to the higher power engine. NPS should use the EPA method (of mass of pollutant per unit of power) to set emission standards, and/or use the EPA standards for these types of engines.

It would be helpful to readers and air quality modelers to state the number of vehicles/snow coaches needed to meet the peak day. We estimate that 180 van-sized snowcoaches would be required to do this.

Rationale for the Preferred Alternative: (page 38)

We recognize the National Park Service has the sole responsibility in developing a preferred alternative within this programmatic EIS process. In light of the stated NPS evaluation criteria for YNP (Pg 39, paragraph 2: visitor enjoyment, visitor access, resource protection, effects on local communities, and health and safety) we cannot fully accept

NPS statements (Pg. 38-39, 1st paragraph in section) which deny an obligation to incorporate information provided by cooperating agencies, as well as input from Park users gathered through the scoping and visitor survey process. The latter processes are primary sources of information on what visitors enjoy, what type of access they prefer, the effect of management choices on local communities, and public concerns for health and safety. This is essential information for the stated evaluation areas. To say NPS "might include" this information with consideration of environmental impacts in developing a preferred alternative suggests a one-sided assessment that discounts the value of certain categories in the stated evaluation criteria. It would be more appropriate to include this information in the preferred alternative development and craft a preferred alternative that responds to and balances the inputs from the evaluation criteria.

As you will see in our future comments, a lack of responsiveness and balance is one of our major concerns with the NPS preferred alternative. Alternative B ignores the overwhelming public preference on access to the park that is an essential element of the visitor experience and enjoyment. It also creates substantial economic harm to gateway communities. While the alternative suggests that a future market segment of visitors who, to date, have been unresponsive to the parks' winter use opportunities may become interested and lessen some of the economic pain, NPS states that it can present no data to show that this will happen. In addition, the preferred alternative does not take full advantage of opportunities to work with gateway communities to address some of the environmental and access issues. It does create some new – and negative – access, public and wildlife health and safety issues that must be dealt with. In short, it remains curious why this is a preferred alternative in light of the stated evaluation criteria.

CHAPTER III
AFFECTED ENVIRONMENT

Mandated Topics

Page 79, bullet two: The DEIS is incorrect in dismissing the evaluation of energy requirements for all alternatives. By the mandates stated, NPS cannot select an alternative that uses more energy than the "No Action" Alternative. The statement "All alternatives propose a level of mechanized winter recreation…the requirements do not vary substantially by alternative," is not correct, as the energy requirements for Alternative G are significantly less than other alternatives. Further, Alternative B would require NPS and its concessionaires to use more energy (fuel) than Alternative A. (Also see page 12, second table, Park Infrastructure and Operation, first row, fuel storage capacity).

Impact Topics Dismissed

Exotic Species: Page 82, Analysis should be completed to determine the difference, if any, between uses for groomed trails or a plowed interior park roads and the possible introduction of noxious weeds and their seed.

Socioeconomic (Including Environmental Justice)

Regional Economy
Page 84, last paragraph of section. It would be appropriate to add that some of the ecreational opportunities found in the GYA, particularly in Montana, are provided for through state grants to groom trail primarily located on adjacent U.S. Forest Service administered lands.

Employment and Income: Page 84 - 88. The descriptions for these two sections discuss the role of tourism., It is stated that the "regional economy are dependent on the quality of the resource base that supports them." While it is briefly referenced in the Regional Economy section, information should also be included on the need for access to public lands for recreation.

Also, it should be more carefully explained to the reader that the statistics used in the evaluation are very general. "Services" includes much more than tourism. For instance the health-care industry is included with the "services" portion of our economy.

Recreation Sector and Park Visitors (Pages 88 - 90)
We appreciate the statements in the Recreation Sector and Park Visitors Section (Pg. 89, paragraphs 1-5) which recognize the importance of winter recreation and related visitor expenditures to the GYA and, more specifically, Yellowstone Park's gateway communities. It is important to recognize that winter visitation and expenditures are essential elements of the economy and culture of communities like West Yellowstone, Gardiner, Cooke City and others in Montana's Gallatin and Park Counties. It is equally important to recognize that these gateway communities are essential resources for Park visitors and Park managers since the businesses and residents located here provide goods and services which enhance visitor enjoyment, assist visitor access, and provide for the visitors' health and safety during their visits to Yellowstone Park and the GYA. The Park managers could not serve the visitors' needs and demands and protect resources without these communities.

One point we would like to add to this section is recognition of the connection between winter visitation and related expenditures and the gateway communities' ability to provide quality services to Yellowstone Park's more numerous summer visitors. Without dependable winter visitation and expenditures it is unlikely that the gateway communities could adequately serve the warm season visitors. If the gateway communities fall short in this regard, that puts more pressure on the Park's services and facilities which are already challenged by current use levels. Recognizing this connection is absolutely necessary for a comprehensive analysis of the impacts caused by changes in Yellowstone Park's winter use management plans. The major negative impacts on the park's gateway communities are not limited to influencing only winter business operations, but year-long operations.

To support and amplify the economic importance of winter visitor groups highlighted in paragraphs 4 and 5 on page 89, we share with you the following information provided by The University of Montana's Institute for Tourism and Recreation Research (ITRR). Winter visitors attracted to Montana for recreation vacations had a average daily group expenditure of $146/day, compared with $107 per day per group for summer visitors. With an average stay of 5.4 days, winter visitor group expenditures averaged $788. Winter visitors in Montana for snowmobiling averaged $188 per group per day and those here for downhill skiing/snowboarding averaged $134 per group per day. The average length of stay for both of these groups was 6 days which resulted in average trip expenditures of $1,128 for snowmobile groups and $804 for skiers. While fewer in number, Montana and GYA's winter visitors are "high value" customers that provide more economic benefit per capita than warm season visitors.

Nonmarket Values (Page 92)
This section implies that there is a bison hunt. Montana law does NOT authorize a hunt. Note Bison EIS for background material.

Public Health (Page 93)
The public health and air quality sections in this DEIS really confuse ambient air quality standards and issues with personal exposure level standards and issues. These are really separate issues and need to be treated separately so that the appropriate agencies can act to resolve them.

Both sets of standards are based on the same data and studies conducted by EPA, however, the purpose of the standards, and applications are different. National Ambient Air Quality Standards (NAAQS), are designed to protect the entire population, from infants to elderly, who might be exposed to pollution without the choice of leaving. NAAQS are a combined level of emissions and a monitoring method. States may adopt these national standards or develop their own stricter standards. Montana adopted its own standards called the Montana Ambient Air Quality Standards (MAAQS). Violations of NAAQS or MAAQS are remedied through an EPA approved process administered by an air quality regulatory agency listed in the Clean Air Act. All sources of the specific pollutant in violation of the standard in the airshed are addressed in an implementation plan designed to bring the area into "attainment" of the standard.

In contrast with NAAQS, personal exposure standards are set on a national level. These standards are designed to protect persons exposed to pollution during their normal course of work, and are for a set period of time or work shift. They cover many more pollutants and levels than the ambient air standards. Studies by NPS, Kado, Peterson, Tyler, and Snook used this type of monitoring. These monitoring methods are very different from NAAQS. Typically, the problems are resolved by the employer, in a very different process than the one used to resolve non-attainment of ambient air quality standards.

Personal exposure standards are set for worker exposure to pollutants over the course of a workday. There are three sets of current personal exposure standards, but only those of the Occupational Safety and Health Administration (OSHA) listed as personal exposure level (PEL) are enforceable. Other non-enforceable standards are used for comparison in the references. This includes the National Institute of Safety and Health (NIOSH), OSHA's research arm, reports their standards as recommended exposure levels (REL), and the American Conference of Governmental Industrial Hygienists (ACGIH) that reports standards as threshold limit values (TLV). For comparison, the OSHA PEL is 50 PPM CO, NIOSH REL is 35 PPM, and the ACGIH TLV is 25 PPM. OSHA standards are referred to in these comments because they are enforceable.

Page 93, Public Health, first sentence, "...increase in number of visitors...." A similar analysis is needed for the increase in snowcoaches. All the statements used to describe snowmobile emissions also apply to this type of snowcoach. For example, pre-1971 Bombardier model snowcoaches that comprised 100 to 85 percent (10 years ago to present) of all snowcoaches in Yellowstone emit much more HC, CO, and NO_x than current automobiles or light trucks. These machines average 5 to 7 miles per gallon of gasoline. EPA records indicate this type of engine (pre 1971, no emission controls) emits about 1,000 grams per mile CO for the speeds traveled in the Park.

Page 93, first sentence after Table 8: The sentence may refer only to the setting of national standards, but does not reflect the method used in Montana. The Montana standard was based on an epidemiological evaluation conducted by the State during 1979-1980.

Snowmobile Emissions Exposure

Page 94, paragraph immediately after the bullets: This paragraph, and others, combine remarks for ambient air quality with comments pertaining to personal exposure levels. These are separate issues. The monitoring methods and standards are different for both. The methods to resolve the problems and concerns of each are also different. For example, if a second reading of CO in a 12-month period exceeds the Montana Ambient Air Quality Standards (MAAQS) or NAAQS CO standards as monitored by DEQ at the West Entrance, then the area would become non-attainment. Actions would be required by the regulating air quality authority to bring the area into attainment. This air quality authority would be the state or federal air quality agency. If OSHA standards were exceeded for employees, the NPS and OSHA would be the authorities to remedy the situation.

Page 94,Third Paragraph, "The results of carbon monoxide monitoring ...indicate... standards were occasionally exceeded..." The NAAQS and MAAQS were not exceeded. The NAAQS establish not just a concentration, but they also identify the monitoring methodology and the averaging time. While there is work indicating that levels above 35 PPM CO occurred for a short period at points in the park, the data referenced here are comparable to personal exposure limits (OSHA is 50 ppm CO). Personal exposure limits were not exceeded.

The sentence should be changed to compare the data to OSHA levels.

Page 94, same paragraph, last sentence, "Montana 1-hour standard for CO...exceeded...." This statement again confuses ambient air quality standards and methods with personal exposure readings. The MAAQS are tied to the same sample collection methods as national standards. There is no evidence in any of the NPS reports that these methods were followed. Further, the highest readings reported in Table 9 were taken inside a kiosk, which is not ambient air. The readings should be compared to OSHA standards (50 PPM) or those taken in a toll booth area. These high readings showed that the ventilation system was not installed correctly. It has since been corrected.

Page 94, Last paragraph, and Tables 8 and 9, "...air quality standards were occasionally exceeded." This statement is incorrect. The sampling and methods used in the study were not intended to determine compliance with state or national ambient air quality standards, so the data should not be compared to these (NAAQS) standards. Comparison of data to national and state ambient air quality standards requires certain analysis procedures. The procedures used by NPS staff were similar to an occupational health investigation. The readings should be compared to OSHA standards (50 PPM) or those taken in a toll booth area. Please note that Park Service employees suspected and reported that Park Service radios interfered with the CO analyzer, making all readings invalid.

The Montana DEQ now monitors the West Entrance of Yellowstone National Park. Monitoring results from February 1999 show that the MAAQS 8-hour average standard for CO (of 9 ppm CO 8-hour average) was approached. These standards could be exceeded at any time, but to date, the standards have not been exceeded.

Page 94, last paragraph, first sentence "Table 9" should be changed to Table 10. Both tables 9 and 10 inaccurately attribute all emissions to snowmobile traffic by listing only snowmobiles at the top of the columns, and do not include snowcoach and other vehicles. No background reading is given to account for pollution that may be coming from other sources like wood stoves or vehicles in the town. The University of Denver report also shows that snowcoach emissions are also high compared to other vehicles with 4-stroke engines. The table should be changed to include columns for snowcoaches and other (non-recreational) vehicles.

This entire table and section should be replaced with a summary of Dr. Norman Kado's September 1999 draft final report regarding exposure levels of mechanics, kiosk employees, and patrol rangers. The measured concentrations should be compared with the applicable federal limits for comparison (50 PPM).

Page 95-Second to last paragraph, "Violation of national standard..." The NAAQS were developed to protect the entire population, and uses air quality monitoring at fixed locations. Dr. Snook's work is concerned with personal exposure issues while riding a snowmobile. Her work is not comparable to NAAQS. Considerable caution must be used in interpreting air quality measurements for individual exposure. Further, an entire study was devoted to the breathing zone for snowmobilers—in other words, where to monitor for pollution likely to be breathed by a snowmobile operator (NAS). Snook's study was done after this work. References to national air quality standards should be removed and a discussion of occupational health needs to be included

Also, the interpretation listed in Snook's report could be improved. NAAQS standards are designed to safeguard all of the population from infant to elderly, not just highway travelers. They were developed through a long process of consensus. Montana's standards were developed in a similar manner. Monitoring methods and siting were agreed upon in this process. Monitors are sited at locations where CO levels would be expected to be the highest, and at locations where air flow is not restricted or affected by physical structures.

Page 95, last paragraph, first sentence and last sentence on the page: There is no evidence in any of the NPS reports that NAAQS methods were followed. It is incorrect to compare these readings to NAAQS. We recommend changing the lines to compare these levels to OSHA or NIOSH standards.

Public Safety (page 96)
State officials have observed during routine trail inspections the past two winter seasons in the Gallatin Canyon that snowmobilers, nearly all non-residents, are traveling north along the highway from the Taylor Fork area. This is a termination point along the Big Sky Trail. Snowmobilers normally trailer their machines in and out of the Taylor Fork area. These snowmobilers are actually traveling on the highway surface or on the shoulder of the pavement to reach their destination, Big Sky resort, and then return to West Yellowstone via the same route. This situation is already dangerous and may become even more hazardous to the normal highway traffic and that of the snowmobilers if the preferred alternative is selected. This statement relates directly back to comments provided for the Greater Yellowstone Coordinating Committee document and Scientific Methods and Data.

Natural Resources

Air Quality
Page 107, last paragraph: The paragraph does not identify any other pollution sources in the Park. It should show other sources of pollution inside the Park that would include propane and oil heaters in visitors centers, hotels, restaurants, and maintenance facilities.

Also, are "ambient sources of air pollution" considered to be the thermal features?

National Ambient Air Quality Standards
Page 108, sentence 4: The method described for an area to become non-attainment for CO is incorrect. The CO standard is not to be exceeded more than once in a one-year period. This is for both federal and state 1-hour and 8-hour average standards.

Page 108, Table 14, Montana Mean hourly average for NO_x is incorrect. It should be 0.3 PPM instead of 0.03 PPM. Also "PM25" should be PM2.5. PM2.5 should be discussed in paragraph two with the other pollutants.

Air Quality Monitoring
Page 109, second paragraph: This paragraph should be broken into two paragraphs because two different types of monitoring are being reported. The first two sentences

should be replaced with information that reflects current knowledge. The existing two sentences describe a grab sample amount of 35 PPM CO near the West Entrance, and explains that the 8-hour average was exceeded in a pilot study in 1995. We believe the reference is to a report identified in the bibliography as "National Park Service, U.S. Department of the Interior. 1995b. Ambient Air Quality Study Results Summary--West Entrance Station, Yellowstone National Park". It is incorrect to compare these readings to NAAQS because they were made to determine personal exposure. The NPS report is still a draft. The draft NPS Ambient Air Quality Study Results Summary report incorrectly quoted Montana DEQ by leaving out the word "not" in front of valid in their appendix A of the report when describing the quality assurance (QA) monitoring of data collection. DEQ performed the QA inspections of equipment and data collection, and found that most of the data were not valid due to leaks in and lack of calibration of the system. Use of the draft report without corrections having been made is not appropriate here.

The results of the carbon monoxide monitoring done by DEQ during the winter of 1998-99 near the West Entrance could be used. The highest 8-hour average recorded was 8.9 PPM CO on February 13. The peak 1-hour concentration was 18.1 on the evening (5-6 PM) February 13, 1999. The summary has been available from Montana DEQ since April and a copy was sent to NPS in May of this year.

Page 109, Air Quality Monitoring, second paragraph: The last two sentences "Snowpack samples from...attributed to regional sources...." is correct and should be referenced to Ingersoll, 1999. This, however, is not air quality monitoring but water quality sampling, and an expanded paragraph with a separate heading is needed to summarize the rest of Ingersoll's work. The paragraph also could point out that increases of most hydrocarbons were proportional to increased snowmobile use levels. The exceptions were MTBE and toluene.

This may also be the appropriate location to summarize "Other Air Sampling Studies" to determine personal exposure of employees (Kado et al. 1999), measure the impacts of ethanol blend fuel using remote sensing of tailpipe emissions (Bishop, Stedman, Morris, 1998 and 1999), and work to identify particulate and aerosol composition (Carroll and White 1999, and Peterson and Tyler, 1999). Montana DEQ will assist in drafting or reviewing this section at the request of NPS.

Wildlife (page 110)

Bison: The writer uses the words "perceived risk of transmission of brucellosis". The Bison DEIS (pages 16 to 22) discusses not only the real threat of transmission, but also the perceptions within livestock markets of cattle from an area which has a brucellosis-exposed herd. Currently APHIS only allows certain bison to roam into a small part of Montana without the possibility of sanctions being imposed on the movement of domestic livestock. In addition, the National Academy of Sciences (NAS), National Research Council report explicitly defines the risk as "small but real". These issues need to be disclosed to the public.

Pages 115 - 116. The DEIS is incorrect on cooperating agencies for the Bison EIS. NPS, State of Montana and the Forest Service are co-lead agencies. APHIS is a cooperating agency.

The last paragraph does not explain to the reader why bison are removed through management actions. Bison are removed according the federal-state Interim Operating management plan due to the presence of brucellosis.

Page 116. The second paragraph is misleading. It expresses the untested Meagher population domino/groomed trails theory for range expansion rather than the actual population expansion from all segments of YNP bison that led to range expansions along all borders. The sentence referring to increased movement westward from the Hayden Valley as "the Firehole Valley range expansion" is misleading. The Firehole and Madison Valleys have since at least the early and mid 70's been included as winter range (Craighead et al, 1973, Aune 1981). Work by Aune (1981) identified bison winter range along the Firehole and Madison Rivers and described movement of bison into and out of the Hayden Valley during which time the winter recreation program was in place. The actual range expansions observed since winter recreation programs began include increased movements out of the Northern area (where no snowmobile trails exist) and increased movement out to Cougar Meadows and West Yellowstone which began in the late 1970's (Aune 1981). Recent work by Bjornle and Garrott (1998) also conflict with the Meagher population domino/groomed trail theory indicate that at the present bison do not use groomed roads for major shifts in distribution.

This DEIS section does not adequately disclose to the reader key elements about bison that are very relevant. In describing the environment the DEIS should reference the recent NAS review of Brucellosis in the Greater Yellowstone Area. Specifically the NAS report (Page 58) states "None of the weather variables or indexes shows a significant correlation with bison moving out of YNP, indeed, none is even suggestive. Only estimated bison population size is significantly related to the number of bison migrating out of the park". Also, the NAS (Page 61) says bison population size appears to be the overwhelmingly significant variable controlling movement out of YNP and that bison, however, have shown no evidence of regulation, but only of range expansion (Page 122). The likely consequence of shifting the boundary of protection from YNP to surrounding public lands is that bison, and perhaps elk, populations will simply increase further, shifting the boundary of protection from YNP to a new point-private lands-where even greater numbers of bison will have to be dealt with.

The discussion by the authors does not reference some work on the impacts of winter programs on wildlife. The following conclusion seems relevant to a discussion of the DEIS; "Recreation activity was not a major factor influencing wildlife distribution and cover use. The principle factors determining selection of cover types and the distribution of wildlife were the location of food coupled with minimizing the energy demands of the environment. (Aune 1981)".

In describing the affected environment the readers understanding of the existing conditions would be enhanced by including some of the following comments. "Bison movements appeared to be less restricted by snow than were elk movements. A network of well established trails and travel routes were developed as snow depth and crust conditions became severe. Bison frequently used river, streams, and warm marshes as travel lanes also. Bison were frequently observed traveling in the packed and groomed snowmobile trail and habitually used the trails as part of their intricate network of trails during winter months". (Aune 1981).

Threatened and Endangered Species (page 120)

Page 123, Canada Lynx: "However, remnant populations persist....." Although on a broad scale this may be true, in Montana, presence of lynx has been documented in all the major habitat areas that one would expect lynx populations to exist in. To apply the qualitative assessment broadly is to imply something that may not exist at least north of YNP in Montana. To date we know of no studies that have quantified the relative abundance question in these areas, but distribution has been well documented at least in the areas north of YNP to Canada.

Park Roadways and Motorized Trails
Yellowstone National Park

Page 135, sixth sentence "Grooming begins when there is adequate snow cover..." This practice should be maintained to help improve water quality on all groomed trails. Preliminary results from studies at Montana State University (Tyler, Peterson 1999) indicate that airborne pollution does not infiltrate to ground level, possibly because the bottom layers of snow dilute the airborne fallout, and some of the pollutants appear to out-gas as temperatures increase. This finding is partly confirmed by Ingersoll 1999, which found pollutants in run-off water to be negligible.

CHAPTER IV
ENVIRONMENTAL CONSEQUENCES

Assumptions and Methods

Public Health, Assumptions and Methods

Page 161. It is incorrect to compare these readings to NAAQS. We recommend changing the lines to compare these levels to OSHA or NISOH standards. The first sentence should be changed to reflect "... employees and visitors might be exposed to air pollution levels approaching national and state standards." The NPS studies referenced for this statement lack the data and methodology to support "...emissions that violate NAAQS..."

Page 161: The text again confuses ambient air quality and personal exposure to emissions. We recommend splitting the discussion to describe the differences in assumptions, methods, and findings to date. The document needs to clarify that ambient air quality is determined through a specific set of monitoring and data collection specified as National Ambient Air Quality Standards (for monitoring and pollutant levels). These standards are designed to protect the entire population from infant to elderly.

The same set of EPA studies also is the basis for personal exposure pollution limits for employees. The monitoring methods reflect the breathing area of the persons affected, an area not considered ambient even if it is outdoors. These recommended levels are generally designed to protect workers.

For air quality concerns, an unstated assumption regarding the West Entrance to Yellowstone National Park is that the current entrance kiosk and method of admittance to the Park will remain unchanged. This assumption needs to be challenged because the location, configuration, and operation of the station contributes significantly to poor air quality at the site. Research in early 1999 shows that emissions levels are highest at the west entrance. Emissions levels are reduced to about 25 percent of this high at Madison Junction and Old Faithful (where more snowmobiles were operating), and emissions are even lower a kilometer west of the entrance, and lowest at a West Yellowstone residential site about two kilometers from the west entrance (Kado et al. 1999).

Most of the high readings of carbon monoxide reported by NPS have been in close proximity to the West Entrance kiosk. A review of the NPS 1995 study data shows that the kiosk station slows air speeds much as a snowfence slows and traps snow. This slowing or stopping of air movement traps emissions around the kiosk. The situation is similar to what occurs at toll booths, and the entrance kiosk fit's EPA's definition of a toll booth. Toll booths with high concentrations of pollutants have reduced concentrations 35 to 73 percent by removing the roof connections between toll stations. Similarly, if the roof to the West Entrance kiosk were removed, air flow around the kiosks would be increased and vehicle emissions would be more easily dispersed. This has been discussed with Park Service personnel a number of times including an analysis in a letter from one of the engineers involved in the winter use studies in August 1997 with respect to improving the ventilation air for the kiosk workers.

Two potential management changes to improve air quality at the entrance were discussed at the West Yellowstone Winter Use meeting in early 1997, but are missing here. The first would be to move the winter entrance station 1 to 2 miles farther into the Park where air flow conditions are better. The cost was estimated at less than $500,000, and industry representatives expressed interest in helping pay for this new entry station. If the entrance were permanently moved, air quality would also improve for summer employees and visitors. Another management technique that is being evaluated but is not discussed is the increased use of express lanes. The use of these lanes would not disrupt traffic flow, would decrease rider and employee exposure to emissions, and would eliminate emissions resulting from idling engines waiting in line. These two different management strategies need to be discussed in this DEIS, and considered as simple solutions to both ambient air quality and personal exposure concerns.

Public Safety (page 162)

Assumptions and Methods for Assessing Impacts: The expectations that a proposed alternative or action would decrease conflicts is not completely accurate. By the displacement of a particular group to the surrounding public lands it has the potential of shifting the conflict and responsibility for administering those conflicts outside the National Park Service's jurisdiction. The analysis is not valid for the preferred alternative. This analysis does not go far enough to address the issue of user conflicts and safety in the GYA.

Natural Resources

Water Resources

Page 163, paragraph 3, "Emissions from 2-stroke engine exhaust include carbon monoxide, hydrocarbons; particularly polycyclic aromatic hydrocarbons, methyl tertiary butyl ether...." The reference to methyl tertiary butyl ether should be removed because it was not found in the emissions of the engines tested in the work by White, Carroll, and Haines (see page C-3) listed as the reference. MTBE was not found in any of the laboratory work, nor in any of the snow samples in Montana listed in Ingersoll 1999. This illustrates an need to continue to study the environmental effects from all winter use and emissions. The proposed adaptive management alternatives are critical to using the best information possible to manage and protect the health of employees, visitors, and the environment.

Page 163, last paragraph, 4th sentence "...greater chemical disposition of (ammonium, nitrate...." Please remove the reference to nitrate should be removed because the study by Ingersoll (1998, 1999) found that nitrates did NOT increase proportionally to the amount of snowmobile traffic. Another regional source was attributed to be the nitrate source. This is reported correctly on page 109, paragraph 3.

Page 164, top of page paragraph: Sentence 1 and 4 are repeated.

Air Quality

Page 164, after sentence 2: The reader would be better prepared to make an informed decision about the alternatives if the status of these regulations was discussed. A draft regulation is due in September 2000, and it will take some time to become final. There will probably be a phase-in of the regulations. In other words, EPA regulations may help the situation in the 2006 to 2008 time frame.

Page 164, end of first paragraph: NPS does not consider the impacts of climate on emissions and emission dispersion. The DEIS should have this described. NPS has sufficient data to review (through a model) the effects of ethanol blend fuel for all vehicles and low emission lube oil on a worst-case scenario. Using data supplied in this DEIS for Alternative A, studies referenced in this DEIS, and DEQ's professional review, DEQ predicts that the use of ethanol blend fuels and low emission lubrication oils in snowmachines could reduce CO emissions of these vehicles by as much as 26 percent. (Table 2, Cain et al. 1999). This potentially could reduce 1-hour maximum CO levels in a worse-case scenario at the West Entrance to 76 to 86 percent of that estimated for

Alternative A. This would be a reduction of 14 to 24 percent which is better than moderate as described on DEIS page 161, Table 36.

It is possible to reduce the CO levels further through a combination of the exclusive use of ethanol fuels and low emission lubrication oils and elimination of stopping and starting at the park entrance. Park access would be through express lanes for both snowmobiles and snowcoaches with speeds limited to no slower than 15 mph. Entrance passes would be pre-sold in West Yellowstone. This approach would reduce estimated peak 1-hour ambient CO levels to 55 percent of those in Alternative A.

Page 164, third paragraph, fourth sentence" It should read "...Road segments from West Yellowstone to Old Faithful were found to have levels of CO possibly exceeding national occupational health standards." Again there is an implication that the NAAQS were violated when, in fact, the methodology was not appropriate for such a determination. This would reflect that OSHA rather than NAAQS monitoring was conducted, and that OSHA levels may have been exceeded.

Impacts of Implementing Alternative A -- No Action (page 176)

Effects on Public Health, Page 177, paragraph 5, last line: The paragraph should specify that only NPS and West Yellowstone rental operators use both these products. Only 5 to 6 percent ethanol blend in gasoline fuel was estimated to be used at the West Entrance in the morning (Morris, Bishop, Stedman, 1999). Yet, this produced a seven percent reduction in CO tailpipe emissions. The amount of ethanol blend in rental snowmobiles and snowcoaches is reduced from 10 percent by the amount of fuel purchased inside the Park because Yellowstone Park Service Stations, an NPS concession, do not carry 10 percent ethanol blend.

Because of the [illegible] environmental benefits, stronger encouragement could be given using ethanol blend fuel and low emission lube oils. NPS should work with their concessions to make ethanol blend available to visitors.

Page 177, paragraph 6: DEQ concurs that there would be adverse air quality impacts from the worse-case scenario of Alternative A, No Action. DEQ's review of data collected and modeling of 1-hour peak emissions indicates that the CO 8-hour average standard is more likely to be exceeded before a 1- hour standard because the evening temperature inversion forms before the majority of snowmobiles leave the Park. This traps emissions from these machines and causes a peak concentration that is potentially higher than the morning peak (Cain et al. 1999). This was also evidenced in the emissions monitoring summary of February 13-14, 1999 (Ugrowski 1999). However, a violation of the 1-hour standard also is likely given the description of a peak, worst-case day in this DEIS.

Natural Resources

Water Resources

Page 179, bottom paragraph, last line: Please remove methyl-tertiary-butyl-ether from this sentence because it was not found in either study by Southwest Research Institute (page C-3).

Page 180, top paragraph: This paragraph combines two very different studies—one on tailpipe emissions by White et al. and one on snowpack chemistry by Ingersoll et al. Please note that Ingersoll found MTBE levels in tens of parts per trillion and most standards are a thousand times higher (parts per billion) in the snowpack nearest the trail. MTBE and toluene measurements did not correlate with snowmobile use.

Page 180, paragraph 3, last sentence: The statement is correct that "impacts from emissions in runoff water have not been found" and should be referenced to Ingersoll 1999.

Mitigation
Page 181, first paragraph: Please change the sentence to read: "This disposition may have a minor decrease in pollution deposition into the snow, but might significantly reduce the persistence of emissions in the run-off water." This is based on two separate sets of findings. This supports the need for continued applied scientific studies to support an adaptive management approach to manage winter use in this area.

Work by Castrol, Rotax Engine Company, and several European universities showed that highly biodegradable, bio-based lube oils maintain over 80 percent of their biodegradable characteristics after being emitted from the engine exhaust, whereas emissions generated from partial combustion of conventional, non-synthetic, mineral lube oils increase their persistence. Over 86 percent of the emissions from Castrol's engine oil (Rotax biodegradable synthetic) were biodegraded within 50 days at 1 degree Celsius, compared to less than 3 percent for conventional fuel and lube oil emissions. The data were collected on projects in England and Germany using an ISO/ANSI method with water at 1 degree Celsius (to acquire European environmental certification). Once aware of the study results, NPS initiated the use of biodegradable lube oils. The use of biodegradable, low-emission lubrication oils for 2-stoke engines should be required of all fleets and permit holders in the parks. We recommend that their use be encouraged in private vehicles.

Second, recent results from Ingersoll (1999) found no impact on runoff water. Preliminary work compiled by Montana State University also indicates that these emissions do not appear to persist in the environment. We feel continued and longer-term studies are important to determine the effects of emissions in the snowpack and runoff water. Continued applied research studies and an adaptive management approach are needed to protect human and natural resources.

Air Quality
Page 181, paragraph four, first sentence: Again there is an implication that the NAAQS were violated when, in fact, the methodology was not appropriate for such a determination. It is incorrect to compare these readings to NAAQS. We recommend changing the lines to compare these levels to OSHA or NISOH standards. Data from DEQ's monitoring

station support a statement that levels are approaching Montana air quality standards..." Please see earlier comments with respect to ambient air quality and personal exposure levels. Traffic congestion should be eliminated as much as possible to eliminate build up of pollutants and reduce operator exposure. NPS should engage additional meteorological studies to determine areas of improved air flow for staging areas and entrance stops. NPS should eliminate stops by using express lanes, or limit stops to areas of better air flow.

Page 181, last paragraph: "Emissions of CO and particulate...reduce visibility." This statement is confusing and possibly an incorrect combination of two statements. Particulate, SOX and NOX emissions contribute to reduced visibility because they are suspended in the air. CO is a colorless, odorless gas.

Page 182, top paragraph, "...air violations recorded there." This statement is incorrect and continues to confuse the issues between ambient air quality and employee/visitor exposures. It is incorrect to compare these readings to NAAQS. NPS has collected data that may indicate personal exposure levels were high, and levels possibly reached or exceeded. We recommend changing the lines to compare these levels to OSHA or NISOH standards. Please see the comments for page 181, paragraph 4 related to reducing congestion and placing staging areas where there is air flow.

Effects on Wildlife

Threatened and Endangered Species

Page 187, "Lynx abundance in YNP is very low". This is a misleading statement. Although there is enough evidence to clearly document lynx presence in YNP, there have been no studies to date that have been designed to provide a measure of relative abundance.. However, because Yellowstone is near the southern limits of its distribution, lynx populations would be expected to be low even under the best of circumstances compared to those populations further north and certainly those found in Canada.

Effects on Natural Quiet

Conclusion

Page 193, first bullet: This sentence appears to state snowcoaches have a larger impact on sound than do snowmobiles. This contradicts statements on the previous and other pages that show snowmobiles have a larger impact. Should snowmobiles be 2 miles and snowcoaches be 1 mile?. See pages 215 and 235 for a corrected statement.

IMPACTS OF IMPLEMENTING ALTERNATIVE B

Effects on the Socioeconomic Environment

GYA Regional Economy

Pg. 198, paragraphs 3-5: Rating the impact of this alternative and the other park management alternatives on the 17-county, 3-state economy is irrelevant in the context of the stated Rationale for the Preferred Alternative outlined on pages 38-39. Effects on local communities is listed among the criteria used to assess the alternatives, but impact on the regional economy is not. The focus and emphasis for assessing Alternative B's effect should be on the major negative impact it has on the West Yellowstone community, in particular, and the other Montana gateway communities, in general. This impact is correctly recognized by the DEIS authors in paragraph 4.

Paragraph 5 suggests that "new users" who have to date been unresponsive to Yellowstone Park's winter use opportunities may be attracted by the new access services offered under this Alternative and that would lessen the economic pain caused gateway communities. NPS cannot provide any information on the number of "new users" who would actually act on this opportunity. There is a very good chance that the economic blow hitting the gateway communities would remain severe.

In addition, we reiterate our earlier point (Recreation Sector and Park Visitors comments) about the interconnected nature of a healthy winter visitor economy to the West Yellowstone community's ability to serve the Park's more numerous warm season visitors. Alternative B's major negative impact on West Yellowstone's economy jeopardizes the community's ability to assist Park managers in the pursuit of providing year long visitor enjoyment, access, and protecting visitor health and safety.

We appreciate the winter visitor survey information and the economic impact analysis that is provided in the Socioeconomic Environment section for Alternative B. This is important information for the public to have as it reviews and comments on the winter use plan alternatives.

As we look at this material, the extreme lack of support among current winter users for plowing the road between West Yellowstone and Old Faithful, the major negative economic impacts imposed on West Yellowstone, and the inability of NPS planners to document whether this new service provides an opportunity that a currently unserved public would actually use magnifies our wonderment over why this proposal is part of a preferred alternative.

Also, within Chapter I, the DEIS discusses "differences between desired conditions and existing conditions". How do the comments on Desired Conditions (pages 3 & 4) correlate to the lack of support for the preferred alternative and the statement that there is a "consistent picture of very low support among current winter visitors to the GYA for the management change contained in alternative B" (page 200)?

Part of the rationale for the plowed road proposal in Alternative B is to provide more access opportunity for low income visitors. On pg. 199, the ability of the Park Service to actually change the mix of lower, middle and higher income visitors to the park is questioned by the DEIS authors. In addition to the e question of NPS influence over this area, the authors state that "the income distribution of summer and winter visitors to YNP is quite similar." This leads us to ask: Is there a real problem the National Park Service is trying to address here? And is it a problem the Park Service has effective tools to address. The DEIS answers "no" to this last question with an additional statement on pg. 199: "The share of the total visitor costs that can be affected by park policy is relatively low." It is our view that weather related considerations and the cost of traveling to the Greater Yellowstone Area in the winter time are more of a deterrent to low income visitors than lack of automobile or shuttle bus access to the park itself. The Park Service and cooperating agencies have no control over Yellowstone's geographic location or the weather. We continue to question how the road plowing portion of Alternative B provides a positive resolution to the major issues the park's winter use plan is supposed to address.

Minority and Low Income Population
Page 199. Our comment about Alternative B's attempt to "provide affordable access" for minority and low income population is summed up by the DEIS writers themselves (Pg. 199, paragraph 5): "Summer visitors do not face the high costs of snowmobile rental, snowcoach use, yet the income distribution of summer and winter visitors to YNP is quite similar." We continue to ask what problem NPS is trying to solve ?

In the same paragraph, the DEIS writers state: "The share of the total visitor costs that can be affected by park policy is relatively low." This point is amplified when talking about winter visitation. Winter travel is more expensive than summer travel because of vehicle and clothing requirements, the necessity of indoor lodging versus camping, recreational equipment needs, food requirements and other considerations. It is our view that weather related considerations and the cost of traveling to and staying in the Greater Yellowstone Area in the winter time are more of a deterrent to low income visitors than lack of automobile or shuttle bus access to the park itself. NPS and cooperating agencies have no control over Yellowstone's geographic location or the weather. We continue to question how the road plowing and shuttle service portion of Alternative B are responsive and provide a positive resolution to this issue.

Conclusion (Pg. 201)
We reiterate the view stated above that the major negative economic impact on West Yellowstone and other gateway communities caused by Alternative B is the relevant evaluation criteria, not the multi-county/state assessment. As we look at this material in context with the extreme lack of support among current winter users for plowing the road between West Yellowstone and Old Faithful, and the inability of NPS planners to document whether this new service provides an opportunity to an interested yet unserved public that could actually act on it, we continue to question the responsiveness of this alternative to the issues at hand and its balance in addressing them.

We would suggest that Yellowstone's current visitor access and recreation services have and are responding to a natural winter visitor market for the Park. Winter recreationists are interested in outdoor activity, unique access opportunities and exploration, not shuttling along a snow berm corridor. Alternative B's road plowing plan is a major violation of the stated visitor enjoyment and access evaluation criteria as well as the economic well being of the gateway communities, most notably West Yellowstone. It makes much more sense to add shuttle access in some form and locale without removing the high demand modes of access. Essentially, Alternative B removes the most popular access form and replaces it with a service that is the least popular and with lowest demand (Draft Report, Winter

1998-99 Visitor Survey, Pgs 22-24, 25, 29, 37). This is hardly responsive to the stated alternative evaluation criteria. There must be other more balanced mechanisms for addressing the environmental issues with the access, enjoyment, health and safety issues.

Effects on Public Health:

Page 202, paragraph 1, first sentence: The word "snowmobile" should be changed to "over-snow vehicle" emissions because all vehicle emissions will be effected. DEQ estimates that CO vehicle emissions would be reduced by about 15 percent of those in Alternative A. The effect of this reduction would be seen in DEQ's evaluation of the estimated worse-case 1-hour CO levels for the West Entrance. For this evaluation, DEQ used information on Alternative B using data from paragraph 2 and pages 217 and 218. The CO level would be about 16 to 22 percent of the CO level in Alternative A for the West Entrance of the Park (Table 1, Cain et al. 1999). It is not the lowest level derived from modeling the alternatives—that would result from either Alternative F, closing the roads, or an alternative based on the exclusive use of electric snowmobiles mentioned on page 208 (alternative fuels), either of which would produce negligible emissions at the West Entrance.

Effects on Public Safety (page 203)

Analysis

No mention is made for the public safety outside the parks within the GYA. Reference is made on pg. 197 that alternative B has the potential to impact visitation levels to the GYA.

Vehicle/wildlife conflicts can be anticipated in addition to increased vehicle conflicts on the plowed road between West Yellowstone and Old Faithful. In Chapter III, Affected Environment, pg. 00, it is stated that wheeled vehicle vs animal accidents are the most common type in Yellowstone (35%) with vehicle vs vehicle being second (32%). Recognition that these conflicts will exist on this section of roadway may necessitate an adjustment of the stated conclusion.

Natural Resources -- Yellowstone National Park

Geothermal

We question the analysis statement that visitation to the geothermal basins along the Madison to Old Faithful road segments may increase due to the longer visitor season. In this document the Park Service has only identified a decrease in expected visitation among current winter users and has been unable to estimate any additional new winter users that might increase park visitation from current levels. Additionally, the information provided about the proposed shuttle service between West Yellowstone and Old Faithful mentioned no opportunities for stopping and viewing along the route. With the limited parking spaces for visitors at Old Faithful and the proposed reservation system it would not appear that auto traffic would generate this additional visitation.

Wildlife

Pg. 208: We are very concerned about the tunnel effect created by plowing roads in high snowfall areas. Our experts' experience in the Park has led them to believe that bison do use roads and snowmobile trails to travel at times. Groomed snowmobile trails provide a packed surface for them to walk on. Even with grooming there is a berm created along side the roads that bison often cannot cross. As such, they often get trapped along the groomed trails.

During the spring as the Park begins to plow the roads one of the most obvious effects is the tunnel that is created by the clearing of snow from the road bed. The berm created by plowing is two-to-three times the size of that created by grooming and could reach six to eight feet in height. This creates an impenetrable wall through which no wildlife can pass. This tunnel effect is observable in each post snowmobile period. During this period the use of the roads by bison increases and the impact is that bison more readily move longer distances and could exit the Park more easily than on groomed snowmobile trails.

We believe the tunnel effect created by winter plowing would encourage bison movement out of the Park complicating bison management in the area of West Yellowstone and Horse Butte. At the very least, some mitigation provisions for the plowing option should be included such as clearing exit lanes at key trail break off points for bison and elk. Or, modifying snow removal methods to eliminate a build up of snow along side the road system.

The major out migration of bison from the Old Faithful area toward West Yellowstone coincides with the spring closure to snowmobiles and the initiation of snow plowing. As such, the preferred alternative could result in early and substantial migrations out of the Park toward West Yellowstone. At a minimum, this concern should be noted and this issue should be evaluated in the EIS

The discussion about ungulates espouses a particular theorem by Mary Meagher but does not disclose the data analysis in the NAS report indicating that population size not winter weather was the factor most critical to range expansion. Both papers by Meagher 1993 and Meagher et al 1994 are discussion papers and do not provide quantitative evidence to support conclusions.

In the same page there is a speculative comment that groomed snowmobile trails may have changed the energetics of bison ecology. This, again, is theory and data does not exist to confirm this. The comment should be framed as an opinion not measured scientific evidence. The only examination of bison population data does not indicate a change in reproduction or recruitment to the bison population following the introduction of the winter recreation program (NAS report 1999).

If the DEIS discusses the energetic value of walking on groomed roads it must also frame the discussion in light of energetic costs of being displaced from roadside areas. The authors repeatedly cite the studies that report energetic stress from winter recreation (Aune 1981, Cassier 1992, Tyers 1999, Picton 1999, Halfpenny et al 1999). In terms of energetics, most of the gains from walking down groomed trails might be offset by occasionally being chased or displaced from habitat by skiers or over snow vehicles. The

DEIS should disclose to the public these elements in terms of the total energy budget for wildlife living within the affected environment.

The March-April period is the time of year critical to most species of wildlife within a winter environments such as YNP (Aune 1981, Craighead 1973, Richen and Lavigne 1978). Recreation activity during this time probably has the greatest impact. (Aune 1981) Recent work by Bjornie and Garrot (1998) and Aune (unpublished data) show that bison increase movements and activity levels during this period. It is intuitive that increased access to the road network caused by plowing during this period is likely to enhance this movement as bison search for spring forage that becomes available.

The section also indicates bison on the Northern end of YNP travel on unmaintained trails, game trails, and over open terrain to and through public lands throughout the park. Included in this list should be the several documented movements we have established in our radio work when bison traveled the highway from Tower over Blacktail and down to Mammoth. This travel route is clearly identified in data from 2 bison wearing GPS collars and we have observed or followed bison on this road several times. Cite (Aune et al, Unpublished data and Aune et al 1997). The DEIS does not have the Aune et al, 1997 citation in the literature cited.

The authors make careful note that bison do not move out of the Park via the road from Seven mile bridge to West. Recent tracking data and observations by many biologists indicate that the road from Madison Junction to Seven mile bridge is the main travel route for bison moving in to the Cougar Meadows and Lower Madison below Seven-mile Bridge. This route is down through a narrow canyon and funnels bison toward the areas which lead ultimately to West Yellowstone. This should be disclosed in the document so the readers know that some critical groomed road segments are essential to movement out of the Park. Additionally there is a critical section of groomed road along the Firehole to Madison Junction which is used most of the time for bison moving to the Madison. These road segments are almost always used by the bison that move to and from these wintering areas.

In the section, "non-motorized uses on groomed and ungroomed routes", the authors dismiss the effect of this use because peoples travel routes are shorter and ungulates do not need to move far to avoid the use. Yet the evidence in several scientific studies shows that the escape distance and behavior reactions of wildlife from skier and snowshoe approaches are in fact greater. The impact of an activity is related to the physiological effect and energetic costs of reacting to the impact not by the distance traveled by winter recreationists. The rationale used here is not valid. Smaller numbers of encounters with people on foot can have greater impact than a larger number of encounters with minimal behavioral reaction.

Clean Air
Page 221, paragraph 6, Clean Air, sentence 3: Please change the word "snowmobiles" to over-snow vehicles to represent that all vehicles will have improved emissions.

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PAGE

Impacts of Implementing Alternative C (page 223)

Socioeconomic

We would offer the same comments as presented for this section in Alternative B with regard to the plowing of the road between West Yellowstone and Old Faithful.

Effects on Public Health, page 225

Page 225, first paragraph: Alternative C is better for air quality than Alternative B. It is not the same as indicated in this paragraph. DEQ estimates that Alternative C would reduce CO emissions from vehicles by about 12 percent. DEQ's analysis and professional review of the 1-hour peak CO level for a worse case scenario at the West Entrance under Alternative C is about 16 to 20 percent of the CO levels estimated in Alternative A.

Effects on Public Safety

We feel it is important to add that vehicle/wildlife conflicts can be anticipated in addition to increased vehicle conflicts on the plowed road between West Yellowstone and Old Faithful. Justification for this was given in our comments on this section of Alternative B. As with our comments in that section we suggest that this addition may necessitate an adjustment of the stated conclusion.

Wetlands and Aquatic Resources

Page 229, second paragraph, sentence two: This sentence does not appear to reflect that Alternative C requires ethanol blend and low emission lube oils. Under Alternative C (Table S-1, S-2), a snowmobile not using these products (producing lower emissions) would be turned away from the park. Further, most snowmobiles entering from West Yellowstone currently have some amount of ethanol blend fuel. The sentence should either be removed or changed to identify that these fuels and lube oils are used.

Page 229, second paragraph, sentence four: Please see comments from page 180 identifying that emissions have negligible impacts on runoff, streams, and lakes.

Air Quality

Page 230, second paragraph, last sentence: This sentence does not appear to reflect that Alternative C requires ethanol blend and low emission lube oils. Under Alternative C (Table S-1, S-2), a snowmobile not using these products (producing lower emissions) would be turned away from the park. Further, most snowmobiles entering from West Yellowstone currently have some amount of ethanol blend fuel. The sentence should either be removed or changed to identify that these fuels and lube oils are used.

Effects on Public Health

Air Quality

Page 230, paragraph 3, sentence 5: The effects of "emissions only slightly reduce ..." does not coincide with the effects of emissions restrictions provided in Alternative D. DEQ found that the emission requirements listed in Alternative D would lower CO emissions from vehicles by 40 to 44 percent of those in Alternative A. DEQ estimates that these emissions would reduce the 1-hour peak CO level for the West Entrance to about 49 percent of the CO level in Alternative A. We would anticipate that NPS would have some method to monitor vehicle emissions entering the park to have high polluting vehicles turned back to be repaired.

Page 231, paragraph 2, third sentence: What is meant by "...improve protection designation of Class 1 Area?" These areas are all designated by statute as Class 1 areas, and cannot be removed from the list except by Congress.

Impacts of Implementing Alternative D
Air Quality
Page 249, paragraph four, last sentence: This sentence needs to be changed. This sentence does not reflect that Alternative D requires machines with lower emission levels. Under Alternative D (Table S-1, S-2), a snowmobile without these emission levels would be turned away from the park. This is at least a moderate impact as described in the DEIS page 161, Table 36, not a minor impact. Please see the our comment on page 230, and also paragraph five, on page 258, Clean Air for a correct assessment of the impacts.

Impacts of Implementing Alternative E
Air Quality
Page 261, first paragraph, and Page 263, paragraph 5, Air quality: Professional judgement of DEQ staff is that air quality at the West Entrance under Alternative E would likely exceed a state or national standard for CO without some modifications.

DEQ also evaluated a modified Alternative E that would require the use of ethanol blend for all vehicles and low emission lubrication oil for all 2-stroke engines entering the Park. This would reduce CO emissions by about 26 percent compared to CO emissions in Alternative A (Table 2, Cain et al. 1999).

A further refinement of Alternative E would be to limit the daily (or hourly) number of 2-stoke engines entering to a 7-year average, and allow entrance to the park during peak hours only by express lane with a minimum speed of 15 mph not to exceed 25 mph. This would reduce CO emissions by 46 percent of those in Alternative A. DEQ estimates that these emission reductions would reduce CO 1-hour maximum levels in a worse case scenario at the West Entrance to about 55 percent of the level in Alternative A–a level that appears to avoid violating the 1-hour standards (Table 1, Alternative E-2, Cain et al. 1999). These refinements should be incorporated into the Alternative E prior to any adaptive management recommendations proposed in Alternative E.

Conclusion
Page 263, last line, "...if monitoring indicates...." What type of monitoring does NPS intend to conduct? No where does this document state that NPS will set up NAAQS monitoring sites to determine ambient air quality impacts. NPS should monitor for both ambient air quality (NAAQS) and possible OSHA levels to determine impacts of the alternatives on

employees, visitors and natural resources.

Impacts of Implementing Alternative F

Effects on Public Health

Page 275, Paragraph 2, sentence 4, "...snowmobile industry....": This section should include what the Park Service can do to reduce employee exposure and improve public health without, or in addition to, changes in engine, fuel, and lube technologies. For example, NPS can relocate an area where snowmobiles reform their groups to areas where air flow is know to be better than the present (Alternative A) situation. Please see our comments on page 161, moving the kiosk. "Cleaner technology" will not, in itself, always reduce adverse impacts to air quality. Eliminating traffic congestion such as exclusive use of express lanes would significantly reduce emissions at the West Entrance. Further, Kado's study shows that air flow at Old Faithful and Madison Junctions is better than at the West Entrance even though more snowmobiles were at these locations.

Air Quality

Page 278, paragraph two, first sentence: Closing the road from West Yellowstone to Old Faithful is not the only alternative to eliminate the emissions from these (snowmobile) vehicles. The exclusive use of electric snowmobiles that could be developed in the time frame covered in this DEIS would have an air quality impact similar that under to Alternate F, closing the road. It also would improve air quality and noise throughout the Park. Expected advances in technology need to be more fully considered.

Conclusion

Page 278, third full paragraph, last sentence "...would protect YNP's designation as a Class 1 clean air area...." YNP has been designated a Class I air quality area by statue, so its designation would not be removed.

Impacts of Implementing Alternative G

Air Quality

Page 291, first paragraph: The use of mass-transit snowcoaches in Alternative G using the newer emission control systems like the van-conversion snowcoaches would greatly reduce CO from vehicle emissions to about 2 to 4 percent of CO emissions under Alternative A. Based on DEQ's modeling analyses, 1-hour peak CO levels for a worse case scenario at the West Entrance would be about 11 to 18 percent of those levels under Alternative A. Alternative G would reduce CO levels below any other Alternative except Alternative F, Closing the roads.

Effects on Adjacent Lands (page 298)

National Forest Lands

Alternative B

Page 299, Specific Impacts on the GNF: The last sentence states that, "Over time, this alternative could decrease the use on the Hebgen Lake District if......causes fewer people to come to the area." The following sentence should be added: " Conversely implementing this alternative would likely increase the use of areas in this district quickly resulting in significant actions regarding area closures and restrictions on winter recreation in the Hebgen Lake Basin, Cabin/Taylor Fork and Buffalo Horn/Porcupine areas of the Gallatin National Forest."

Specific Impacts on the Beaverhead-Deerlodge NF: What should be added to the last sentence in this section is: "Conversely implementing this alternative would likely increase the use of areas in this district too quickly resulting in significant actions regarding area closures and restrictions on winter recreation."

Alternative C
Same comments as above.

Alternative E (Page 301)
Add the following new subsection as follows: "**Specific Impacts on the Gallatin and Beaverhead-Deerlodge NF**. Restricting snowmobile use in the Park may increase snowmobile use on these forests. With any contemplated closures there must be, as part of the closure process, an in-depth analysis of effects on national forest lands where displacement of recreationists is anticipated. The proposed closure areas would have the greatest affect on forest lands in the general area closest to the Park entrance proposed for closure. For example, if it was the West entrance, the forest lands needing in-depth impact analysis would be the Hebgen Lake Basin to Porcupine area. The forest lands and the effect the closure might have on the natural resources on those lands is directly relevant to YNP. The lands on these forests are occupied by large numbers of wildlife shared both by Montana and YNP. These wildlife seasonally use both areas and include elk, moose, bison, lynx, wolverine, pine marten, etc."

Alternative F (page 302)
Specific Impacts on the Gallatin NF: After the second sentence add the following: "This increase could be significant in the Hebgen Lake Basin, Cabin/Taylor Fork and Buffalo Horn/Porcupine areas. Although it may only be short term, it could result in significant and relatively quick changes to forest winter recreation management in this portion of the forest."

Specific Impacts on the Beaverhead-Deerlodge NF: Add the following: "This increase could be significant and although it may be short term, it could result in significant and relatively quick changes to forest winter recreation management in portions of the forest."

Alternative G (page 303)
Specific Impacts on the GNF: Add the following, "By restricting access to the park to mass transit vehicles only, snowmobiles could be displaced to adjacent forest lands with effects similar to Alternative B."

Effects on States

Pg. 310: There was no mention or discussion of effects on State land (of any kind) in Montana. With that we offer the following: "Montana Department of Fish, Wildlife and Parks owns important wildlife habitat in the heart of the Gallatin Canyon. These lands lie in a checkerboard arrangement with the Gallatin National Forest. Any of the alternatives that propose closing access to the park from West Yellowstone could lead to impacts on important and sensitive wildlife winter ranges in the Gallatin Canyon. These lands provide important winter habitat for elk, moose and bison. These lands are primarily situated from the Gallatin Canyon park entrance north to the Porcupine drainage and also includes land in the Taylor Fork. Montana Department of Fish, Wildlife and Park's effectiveness in managing winter recreation is directly influenced by Gallatin National Forest management due to the checkerboard pattern. Effects and concerns addressed above in all the alternatives are directly relevant to these properties.

Relationship Between Local Short-Term Uses & Long-Term Productivity (Page 315)

Pg. 315, Second Paragraph of Section: Although actions may be specific to the three parks, effects go far beyond the park boundaries. In Montana, those potential effects on wildlife can be assumed to follow the migrating ungulates leaving the park to winter in Montana. In short, the activities may be local but their effects are felt beyond the immediate area.

Pg. 315, Third Paragraph of section: In order for the adaptive part of Alternative E to be correctly applied, the monitoring would need to take place in a much larger area outside the park as well. This will require resources. Because YNP is not a contained ecosystem, we share with the Park important wildlife resources. It is wrong not to consider the true effects of implementing alternatives without considering, in-depth, the full range of impacts to these resources in Montana. To not do this from a wildlife perspective would contradict the concepts of coordinated/ecosystem management.

Cumulative Impacts Analyses (Page 318)

Assumptions and Methodology

Pg. 318 - 319: To state that the alternatives "do not vary greatly in terms of general cumulative impacts" is incorrect. Alternatives that close the snowmobile access at West Yellowstone could increase use outside the park. This increased use could result in biological and social consequences to sensitive areas in the Gallatin and Madison areas. These impacts to could be greater than the impacts the NPS has identified for within the interior of the park.

Air Quality
Areas of Concern
Potential Sources of Impact
Additional Impacts of Proposed Actions
Page 323, paragraph 2, sentence four: "...EPA proposed regulations..." This section should also identify that existing regulations may impact alternatives in this DEIS. For example, if ambient air quality levels exceeded standards at the West Entrance, plans to correct the situation will be developed and implemented.

Cumulative Impacts by Resource (Page 319)
Wildlife (Page 323)
Pg. 323 - 324: This has redefined the concept of cumulative impact analysis relating to proposed actions. There is very little if any substantive discussion/summary of impacts proposed in the DEIS relating to surrounding areas. Where is the discussion on impacts to State and National Forest management issues created by the alternatives? Where is the acknowledgment that impacts from some of the alternatives, even if they were of some "short" term nature, could be very significant in affecting natural resource management decisions on neighboring jurisdictions.

In Montana there could be impact as a result of closing the West Entrance to snowmobiling in the Gallatin and Madison Mountain Ranges. With the displacement of snowmobile activity to the north, in an area already providing high use winter recreation activities, will come impacts to wintering wildlife, lynx, wolverine and pine marten habitat and human congestion. Many of the effects from existing increases in winter recreation activities are already creating some level of increasing concern. With an influx of additional recreationists, that in all likelihood will take place with some of the alternatives, these problems will be exacerbated over a very short period of time. This displacement to the north of winter recreationists could be short or long term in nature.

The DEIS inadequately documents and discusses the impacts of the alternatives in the context of adding one more additional burden or concern in an area already receiving or being affected by many other types of human activity that the parks do not have to deal with inside their borders.

Pg. 324, "Potential Sources of Impacts": We offer the following clarification to the discussion of the Quake Lake bighorn sheep die-off:

The wildlife biologist responsible for this sheep population indicates that this population of sheep was increasing as a result of good lamb recruitment. The primary cause of the die-off is directly attributable to the winter of 96-97 (it was extremely harsh in terms of snow depth, temperature and length on the range these sheep occupied) and an associated pneumonia winter kill. Because of the relatively sudden and very quick die-off, we do not attribute all the other things listed in this paragraph as contributing significantly to the die-off. This was not a slow decline that could be indicative of an accumulation of all the "noise" that was mentioned in this paragraph. It was sudden and nearly complete. These

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kinds of die-offs have occurred throughout the northern Rocky Mountain Region. In fact, similar die-offs (4 to be exact) occurred during the 1990's in Southwestern Montana and Idaho. These die-offs occurred in areas where very little if any development was occurring. Predation, illegal hunting and winter recreational use of winter ranges did not contribute to these sudden and catastrophic die-offs.

Pg. 324, Additional Impact of the Proposed Actions: Ungulates leave the park because there is high quality winter range available at lower elevations north of the park in Montana. In the Gallatin and Madison, when elk leave the park to winter in Montana, they do not return until the spring. Winter ranges in the Gallatin and Madison can in no way be replaced by those in the park if these populations are going to survive and remain viable over time. In short, it is not the presence of other sources of impact within the park that is critical to herd survival, it is mitigation and management of those impacts on the winter ranges outside the park that will determine the critical element to herd survival. This is completely relevant to the Gallatin and Madison winter ranges. As an example, approximately 75% of the winter range for the Gallatin elk herd that leaves YNP to winter in the Gallatin Canyon lies outside YNP.

The Firehole population is an exception, but accounts for a small fraction of elk that live, reproduce, migrate and die and which depend on the northwest portion of the Park for spring, summer and fall ranges. Most of the elk leave, because of winter conditions in YNP, to winter in Montana.

Although the last two sentences in the paragraph are accurate, this section does not go the additional needed step in acknowledging the effects of displaced recreation resulting from some of the alternatives on the important winter ranges in the Gallatin and Madison that winter several thousand elk.

It is not a full and complete discussion of cumulative impact if it is limited to just the area within the park boundaries.

Threatened and Endangered Species (Page 325)
Pg. 325 -326: An area of inadequacy exists in the discussion of wolves, bald eagles and Canada lynx. The Gallatin and Madison ranges are occupied lynx habitat. Again, displacement, resulting from some of the alternatives, of winter recreation to the north has not been fully analyzed. Bald eagles, particularly those nesting in the Hebgen Lake area could be impacted by recreational displacement from some of the alternatives, again not fully analyzed. Impacts due to their proximity to West Yellowstone, could increase. Effects of displacement from some of the alternatives on wolves and their use of winter ranges in the Gallatin and Madison again were not fully analyzed. Since a large number of elk exit the northwest corner of the park to winter in Montana, wolves associated with the park follow. Again, they end up in the same places north of the park that are creating concerns over potentially significant increases in winter recreation, resulting from some of the alternatives. In short, a failure to fully analyze/discuss the cumulative impacts that may occur for these species that utilize areas in and outside the park.

It is not a full and complete discussion of cumulative impact if it is limited to just the area within the park boundaries.

Species of Special Concern (Page 326)
Areas of concern (page 326): It is not a full and complete discussion of cumulative impact if it is limited to just the area within the park boundaries.

Additional Impacts of the Proposed Actions (page 326). How can the last sentence in this section state that, "All alternatives would have minor or negligible impacts", if the area analyzed has been restricted to artificial boundaries that do not confine wildlife species?

APPENDICES

Volume II, Appendix H, Air Quality Studies:
H-2, Table 1, last row, column 3: The statements imply that DEQ's monitoring is more extensive than is the case. Please correct it to reflect that DEQ monitors PM-10 at one site in West Yellowstone (not in the Park) and CO at the West Entrance.

Page H2, Paragraph 1, first sentence: Please correct the statements because there have been no violations of national or state ambient air quality standards. It is incorrect to compare these readings to NAAQS. We recommend changing the lines to compare these levels to OSHA or NISOH standards.

Please refer to our comments for DEIS pages 93, 94, 95, 109, 161, 164,181,182, and 323. The manner that this paragraph is compiled implies that violations were recorded by a SLAMS site, which is not true.

Page H-2 and H-3 We recommend that the abstract and major findings be from these studies be included for those reports that are final, and a status summary given for those that are not final.

Page H-3, first bullet, second sentence: "Ingersol" is misspelled (Ingersoll).

Page H-7, top partial paragraph, last sentence: "exceeding national air quality standards" There are no data collected according to the standard reference method (in Snook's study) to show visitors were exposed to carbon monoxide levels "exceeding national ambient air quality standards." The method Snook used to develop this data was not taken according to Reference Method 40 CFR sec 50.11 Appendix C or equivalent method. No violations of ambient air quality standards have been recorded or presented to date. High levels of carbon monoxide have been reported that may approach federal standards for workers.

YELLOWSTONE NATIONAL PARK
WINTER USE PLAN - DRAFT EIS

Montana's Proposed Preferred Alternative

This alternative is based on adaptive management for emissions and wildlife. The alternative also includes the creation of an advisory committee to make recommendations to the Park Service with regards to the research, monitoring and other activities to make adaptive management successful and to make recommendations and create partnerships between local communities and NPS.

This alternative emphasizes the protection of wildlife and other natural resources while allowing park visitors access to a range of winter recreation experiences. It uses an adaptive planning approach that allows the results of new and ongoing research and monitoring to be incorporated. Using criteria stated within Executive Order 11644 (as amended) and its implementing regulation (36 CFR 2.18), monitoring results demonstrating disturbance to wildlife or damage to park resources would be cause to implement actions for mitigating these conditions (e.g. closure to snowmobile use). The alternative calls for the institution of an advisory committee to make recommendations about adaptive management studies, standards for addressing mobile emission and sound issues, as well as increasing partnerships with local communities and private groups. Local, county, state and federal agencies, as well as representatives from the snowmobile industry, local communities and environmental groups, would participate on this committee.

Actions Common to All Three Park Units

This alternative would be a commitment to the development of acceptable measures for mitigating impacts, consistent with criteria in 36 CFR 2.18.

This alternative encourages partnerships and public participation to address natural resource management issues, mobile emission and sound issues, and greater communications with local communities, by establishing an advisory committee (established by the Secretary of the Interior under the Federal Advisory Committee Act.) The advisory committee would be divided in two subcommittees with specific functions. One subcommittee will serve as a technical advisory committee to the NPS regarding the on-going research and monitoring necessary for adaptive management. It is appropriate for state agencies who manage wildlife outside the Parks and air quality specialists who are required to enforce Clean Air standards to partner with the Park Service and other federal agencies in this adaptive management approach. The second subcommittee would be composed of representatives of the local private sector to enhance partnerships between the local communities and NPS and provide for better means to communicate with the visiting public.

> TECHNICAL SUBCOMMITTEE: The subcommittee would provide recommendations on environmental studies needed under the alternative's adaptive planning approach. The subcommittee would be compromised of 10 people. They would include representatives of the Idaho, Montana and Wyoming environmental quality agencies and state park or fish and game agencies who's representatives would be nominated by the respective state's governors and appointed by the Secretary. In addition, the subcommittee would include two representatives of the National Park Service, one representative of the EPA nominated by the Region 8 Administrator and one representative of the US Fish and Wildlife Service.
>
> LOCAL SUBCOMMITTEE: The subcommittee would provide recommendations on increased partnerships to improve visitor experiences and enhanced communications for interested parties. The role that local communities play in providing a "pleasuring ground" for the American people is vitally important. The subcommittee would be compromised of 14 individuals. One representative nominated by each board of county commissioners of: Gallatin County, Montana, Park County, Montana, Teton County, Wyoming, Park County, Wyoming, and Fremont County, Idaho; two representatives of different environmental organizations, one representative of a local chamber of commerce and one representative of a local snowmobile organization appointed by the secretary; three representative of the departments of commerce or their equivalent in Idaho, Montana and Wyoming who will be nominated by the respective governor of the state, and two representative of the National Park Service appointed by the secretary.

Require the sale of only Bio-Base Fuels (10% ethanol blend fuel and synthetic low-emission oil) within the Parks beginning with the 2001-02 winter season. All commercial snowmobile operators in West Yellowstone, Jackson and at the other entrances would also be required to use Bio-Base Fuels for all snowmobiles they send into the Parks.

Establish an interim visitor carrying capacity to address overcrowding concerns, trail maintenance issues, and air quality concerns based upon past use patterns and air quality monitoring. Use adaptive planning to address long-term carrying capacity for visitors and wildlife.

- Adaptive management for air quality and wildlife management would be done through review of data collected, determination of new study needs, and set the establishment of policies for managing resources based on the scientific information that is collected. Adaptive management for wildlife would based upon results of scientific research coordinated through a cooperative effort between the National Park Service and Montana, Wyoming and Idaho fish and game agencies. Research needs and priorities would be identified by the Technical Subcommittee. The National Park Service and the respective state agencies would be responsible for securing the necessary funding to conduct appropriate research.

- Establish a night-time closure to entry into YNP, GTNP, and the Parkway from 10 PM to 6 AM to promote public safety, improve trail maintenance and protect wildlife.

- Implement aggressive information programs in cooperation with state snowmobile associations and other winter recreation safety programs to encourage appropriate winter recreation behavior and etiquette. This process will be done in conjunction with the local subcommittee of the advisory committee.

- To increase interpretive opportunities related to the unique aspects of the parks, the Parkway, and the winter environment, provide interpretive programs at designated areas and warming huts in both parks, and in snowcoaches serving the north and west sides of YNP. Provide interpretive ski tours and programs near Tower and Canyon in YNP and near Moose, Colter Bay, and Flagg Ranch in GTNP and the Parkway.

- Implement an informational program on snow and trail conditions, points of interest, and available recreational opportunities to make visitors aware of all types of winter recreation opportunities possibly in part through partnerships that establish NPS-visitor contact opportunities in gateway communities.

- NPS would support an educational video for use in gateway communities and at all area rental shops to inform rental snowmobile operators regarding snowmobile safety, operational laws and etiquette, and park resource management.

- Support strict enforcement of the posted speed limit, with a maximum speed limit of 45 mph.

- Also, NPS would disperse use throughout the Parks by better utilizing existing visitor facilities for over-night lodging, food services and warming huts to reduce impacts on natural resources and to assure a quality visitor experience. Provide additional portable warming huts at areas where facilities do not presently exist.

Actions for Yellowstone National Park

- Continue scientific studies and monitoring related to park resources and winter visitor use. NPS will consult with the technical advisory committee on studies and monitoring, and the prioritization of these activities. If these scientific studies and subsequent reviews substantiate that human presence or activities have a detrimental effect on park resources that could not otherwise be mitigated, the closure of selected areas of the park to visitor use, including sections of roads, could result, any federal action taken will be done in accordance with NEPA, including a public comment period, and be tiered off this document. Prior to any closure of roads, a 1-year notice would be required before any closure is implemented.

- Prohibit plowed road access anywhere in YNP during the winter season, with the exception of continued automobile access to northern attractions in the Gardiner, Mammoth, Tower-Roosevelt and Cooke City areas.

- Provide expanded non-motorized opportunities/trails away from main motorized routes by providing regular skier shuttles from Old Faithful and West Yellowstone to non-motorized areas away from these sites.

- Restrict non-motorized uses in wildlife winter range to travel on designated trails only.

- Where possible, use separate areas for different winter uses as part of adaptive management.

- Address congestion and visual concerns regarding snowmobile parking at Old Faithful by relocating snowmobile parking away from the Visitor Center area to the Old Faithful Lodge area. Reserve parking in the immediate Visitor Center area for only snowcoaches and ADA access for snowmobilers.

- Require all west gate entrance passes to be pre-purchased at local outlets or at the Public Lands Information Center in West Yellowstone for entrance into the Park during peak morning hours. Promote the sale of these pre-paid passes at all other entrance times from the West entrance and at all other entrances. These activities will be undertaken with consultation of the local subcommittee.

- Keep the length of the winter use season as the period from mid-December to mid-March.

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PRELIMINARY AIR DISPERSION MODELING ANALYSIS OF YELLOWSTONE NATIONAL PARK WEST ENTRANCE WINTERTIME CARBON MONOXIDE EMISSIONS

INTRODUCTION

The Montana Department of Environmental Quality (DEQ) participated as part of the Governor's review team on the Winter Use Plan Draft Environmental Impact Statement for the Yellowstone and Grand Teton National Parks and John D. Rockefeller Jr., Memorial Parkway (DEIS). DEQ was asked to investigate the document for errors, and explore the science of air and water quality as they relate to each of the proposed seven alternatives. Each alternative in the DEIS provided a different scenario and impacts on air and water quality, from Alternative A, No Action, to Alternative F, Close the roads from Mammoth and West Yellowstone, leaving only the roads from Flagg Ranch and Cody open.

The DEIS said that the final Environmental Impact Statement (EIS) might use modeling to evaluate the alternatives. Among other analyses, DEQ conducted preliminary air dispersion modeling of the possible impacts to air quality from the activities described in the DEIS alternatives. This analysis was performed to assist in the decision making process but does not necessarily represent actual events. The model predicted Carbon

Monoxide(CO) concentrations that are thought to have a +/- 30% to 40% confidence level due to limited existing meteorological and CO emissions data. Monitoring data from this past year at the west entrance indicated the average carbon monoxide levels over an 8-hour period may exceed the 9.0 parts per million (ppm) National Ambient Air Quality Standard (NAAQS) before the 1-hour 23.0 ppm Montana standard would be exceeded. However, more data collection is necessary before a final determination can be made. For completeness purposes, this 1-hour standard was examined in the final analysis.

A modeling analysis was performed by the Monitoring and Data Management Bureau, DEQ, to estimate the CO concentrations from vehicle emissions near the roadways at the west entrance of Yellowstone National Park. A U. S. Environmental Protection Agency (EPA) "hot spot" or intersection model, CAL3QHC, was used to predict the CO concentrations from vehicles entering and exiting the Park during the wintertime. This model predicts concentrations of inert air pollutants such as CO from motor vehicle emissions along roadways one hour at a time. A line source dispersion model and a traffic algorithm for estimating vehicular queue lengths at signalized intersections is incorporated into the model. It is considered a screening model that provides a quick, worse case analysis using several broad assumptions including meterological and site characteristics to estimate CO concentrations. Other air pollution models are available, referred to as "refined", for a more complete, in-depth analysis that requires on-site meteorological data.

The two heaviest wintertime hourly traffic periods were examined during a 24-hour period; these occurred during the morning and evening periods as the vehicles entered and left the Park. Nine total alternatives were examined, A through G; seven of the alternatives were obtained from the DEIS. One of the seven, Alternative E, was slightly modified (E-2) by the local communities and included in this analysis. Howard Haines, DEQ, provided Alternative H; the information for this alternative was suggested in the DEIS, Page 208.

Each option contained variations on the hourly cycle time, fuel usage, type and number of vehicles entering and exiting the entrance. This information and snowmobile CO emissions data were derived from the alternatives in the DEIS, various supporting reports including White et al. (1998, 1999), Kado et al. (1999), and Bishop (1998, 1999), Yellowstone National Park Visitor Services, and confirmed through communications with these researchers and Yellowstone National Park staff. Cycle time is the elapsed time from the passage of one vehicle to the next as they stop and go through the entrance station, much as would occur at an intersection with a traffic signal. The other vehicular CO emission factors were obtained from the USEPA Compilation of Air Pollutant Emission Factors – Volume II: Mobile Sources, AP-42, and Emission Facts: Idling Vehicle Emissions. These emission factors were selected for high altitude and wintertime temperatures.

The air dispersion model used for this study has limits to the maximum input traveling and idling CO emission rates, 1,000 grams/mile and 1,000 grams/hour, respectively. When an alternative scenario required an emission rate greater than one of these maximums, for example Alternative A, the limit was entered into the model.

FEDERAL AND MONTANA HOURLY CO STANDARDS

The 1-hour National Ambient Air Quality Standard (NAAQS) for CO is 35.0 ppm not to be exceeded more than once a calendar year. The hourly Montana Ambient Air Quality Standard (MAAQS) is 23.0 ppm for CO not to be exceeded more than once a calendar year, 34 percent less than the Federal standard. The Montana standard was based on an epidemiological evaluation conducted by Montana during 1979-1980. Other states with a different hourly CO standard than the federal one are California and New Mexico, 20.0 and 13.1 ppm, respectively. The 8-hour average CO NAAQS and MAAQS standards are 9.0 ppm not to be exceeded more than once a calendar year.

MODELING VERSUS MONITORING

The model predicts the maximum 1-hour CO concentrations at each location (receptor) and wind direction that has been manually entered by the user; these locations represent areas where the public has access. According to the model requirements, these receptors cannot be located within 10 feet (3.0 meters) of the traveled roadways or within tollbooths (kiosks), intersections, or crosswalks. Another receptor is included to represent the local CO monitoring station if one exists. Monitoring stations are placed near the sources of pollutants according to stringent USEPA siting criteria. For a microscale CO site, such as the one located at the west entrance of the Park, the inlet to a CO measurement instrument must be between 2 and 10 meters (7 and 33 feet) from the roadway edge and sufficiently distant from obstacles that obstruct air flow such as buildings and vegetation to assure representative data.

The locations of the highest 1-hour CO concentrations predicted by the model will not necessarily correspond to the location of the CO monitoring station receptor. The type, number, and activity of the vehicles (entering or exiting the park entrance), and wind direction will affect where the model calculates the maximum CO concentration.

Compliance with the hourly National and Montana CO standards is determined by the second highest hourly concentration, but the model only provides the first. Therefore, the model results can only be applied as a rough estimate whether compliance with the standards will occur. Also, air pollution modeling focuses on the public's exposure to air pollution so the highest CO concentration predicted, regardless of the location, is used for comparison to the standards. In reality, the data collected at the monitoring inlet will determine the area's compliance status.

After the preliminary analysis, selected alternatives were evaluated in reference to both 1-hour CO NAAQS and MAAQS. CAL3QHC does not provide any information pertaining to the 8-hour average CO standards. A "persistence factor" can be applied to the 1-hour concentrations to estimate the 8-hour CO concentrations. A persistence factor indicates the longevity of the carbon monoxide in the atmosphere within an area and is usually estimated using on-site CO data. However, due to limited wintertime CO data collected at the west entrance, a typical persistence factor was used in this analysis, 0.75.

BACKGROUND CO CONCENTRATION

CAL3QHC is an intersection or "hot spot" model developed to examine the impacts of vehicles entering and leaving a small study area on an hourly basis. This model evaluates only the direct effects of CO emitted by the vehicles included in the model input file. The results do not include CO impacts from all other sources that are close enough to affect the air quality at the receptor locations. Indirect impacts from these sources are added to the model results as "background" CO. These sources include CO from residential wood burning and vehicle emissions in West Yellowstone. The CAL3QHC model also does not have any way to account for residual CO still remaining in the atmosphere from emissions during a previous time period. CAL3QHC starts each analysis with the assumption that the current CO level is zero. This assumption is often appropriate, but under the stagnant conditions resulting from strong and persistent atmospheric temperature inversions and very low wind speeds often present in Montana, residual CO can have a dramatic effect on ambient CO concentrations. Carbon monoxide is not a reactive species and unless some dispersion is available, CO ambient levels can remain high for several hours after the emissions have been reduced to very low levels. These residual CO effects must also be factored into the background value used to determine the final model results.

Generally, a background value is obtained from direct measurement at the site of interest. In October 1998, DEQ installed a microscale carbon monoxide monitoring station (30-031-0013) on the northeast side of the Yellowstone National Park west entrance. Due to machine malfunction, minimal wintertime data was collected. The highest hourly CO concentration, 18.1 ppm (parts per million) was measured on February 13, 1999 for the 5:00 to 6:00 P.M. period. The CO concentrations decreased to 3.1 ppm for the 11:00 P.M. to 12:00 A.M. period. Reviewing the data and using the Monitoring and Data Management Bureau staff professional judgement, a 5.0 ppm background CO concentration was selected to represent the worse case residual impact of CO during stagnation periods.

RESULTS

The following is a summary table of the hourly traveling and idling vehicular CO emissions, and the maximum 1-hour CO concentrations predicted by the air dispersion model for each of the nine alternatives including the 5.0 ppm background CO concentration. Also listed are the percentages of the alternative emissions and concentrations relative to Alternative A (Baseline).

Summary table of the hourly traveling and idling vehicular CO emissions, and the maximum 1-hour CO concentrations predicted by the air dispersion model for each of the nine alternatives including the background CO concentration; concentrations below the 35.0 ppm 1-hour NAAQS are italicized.

Option	Description	Hourly Traveling Vehicle CO Emissions (kilograms/trails)		Percentage of Alternative A (%)		Hourly Idling Vehicle CO Emissions (kilograms/hour)	Percentage of Alternative A (%)	First Highest 1-Hour CO Concentration (ppm)ᵃ		Percentage of Alternative A (%)	
		A.M.	P.M.	A.M.	P.M.	A.M. Only		A.M.	P.M.	A.M.	P.M.
A	Baseline: Snowmobiles and Snowcoaches	790.2 (1,740.6 lb.)ᵇ	351.1 (772.4 lb.)	*	*	123.8 (272.4 lb.)	*	55.0 (with 24 sec. stop time)	21.7	*	*
B	Only Wheeled Public Shuttle Service, Road Plowed	6.6 (14.5 lb.)	4.9 (10.8 lb.)	0.8	1.4	23.6 (51.9 lb.)	19.0	12.3	3.3	22.5	16.7
C	Alternative B with Ethanol for All Gasoline Fueled Vehicles, Roads Plowed	5.0 (11.0 lb.)	4.0 (8.8 lb.)	0.6	1.1	19.7 (43.3 lb.)	15.9	11.0	3.3	20.0	16.7
D	Approx. 40% of Alternative A	497.4 (1,094.3 lb.)	142.1 (284.2 lb.)	63.0	40.5	52.7 (115.9 lb.)	42.6	27.3	10.7	49.9	49.5
E-1 Modified	Alternative A with Oxygenated Fuel and Low Emissions Lube Oil	708.2 (1,558.0 lb.)	281.1 (618.4 lb.)	89.6	80.1	88.4 (194.5 lb.)	71.4	41.9	18.4	76.6	83.3
E-2 Modified	Similar to Alternative E-1 with No Stopping, All Vehicles @15 miles per hour	423.1 (931.9 lb.)	*	53.5	*	*	*	28.0	*	55.1	*
F	Roads Closed to All Traffic	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G	Access by Snowcoaches Only	13.2 (29.0 lb.)	13.2 (29.0 lb.)	1.7	1.5	0.0	0.0	6.1	4.0	11.2	18.4
H	Alternative A with 60% Electric Snowmobiles	178.2 (392.0 lb.)	72.9 (160.4 lb.)	22.6	20.7	29.0 (63.8 lb.)	23.4	14.4	10.4	26.3	32.6

ᵃ ppm = parts per million
ᵇ lb. = pounds.

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The following table lists the percentage source contribution and source concentration to the maximum 1-hour CO concentrations of the nine alternatives without the 5.0 ppm background CO concentration; concentrations below the 1-hour NAAQS are italicized.

Alternative	Max 1-Hour CO Conc. (ppm) *	Percentage Source Contribution (CO Concentration – ppm) Snowmobile	Snowcoach	18 Wheeler Diesel Truck	Snowplow	Light Gas Truck	Gas Personal Car	Touring Diesel Bus	Gas Shuttle Van
A A.M.	49.7	99.3 (49.4 ppm)	0.7 (0.3 ppm)	0.0 (0.0 ppm)	•	•	•	•	•
A P.M.	*26.7*	99.6 (26.6 ppm)	0.4 (0.1 ppm)	0.0 (0.0 ppm)	•	•	•	•	•
B A.M.	*7.3*	•	•	•	0.0 (0.0 ppm)	26.0 (1.9 ppm)	15.1 (1.1 ppm)	9.6 (0.7 ppm)	49.3 (3.6 ppm)
B P.M.	*0.3*	•	•	•	0.0 (0.0 ppm)	33.3 (0.1 ppm)	33.3 (0.1 ppm)	33.3 (0.1 ppm)	0.0 (0.0 ppm)
C A.M.	*6.0*	•	•	•	0.0 (0.0 ppm)	25.0 (1.5 ppm)	15.0 (0.9 ppm)	11.7 (0.7 ppm)	48.3 (2.9 ppm)
C P.M.	*0.3*	•	•	•	0.0 (0.0 ppm)	33.3 (0.1 ppm)	33.3 (0.1 ppm)	33.3 (0.1 ppm)	0.0 (0.0 ppm)
D A.M.	*22.3*	94.2 (21.0 ppm)	5.8 (1.3 ppm)	0.0 (0.0 ppm)	•	•	•	•	•
D P.M.	*10.7*	100.0 (10.7 ppm)	0.0 (0.0 ppm)	0.0 (0.0 ppm)	•	•	•	•	•
E-1 Modified A.M.	36.9	98.1 (36.2 ppm)	1.9 (0.7 ppm)	0.0 (0.0 ppm)	•	•	•	•	•
E-1 Modified P.M.	*21.4*	99.5 (21.3 ppm)	0.5 (0.1 ppm)	0.0 (0.0 ppm)	•	•	•	•	•
E-2 Modified A.M.	*23.0*	99.6 (22.9 ppm)	0.4 (0.1 ppm)	0.0 (0.0 ppm)	•	•	•	•	•
G A.M.	*1.1*	•	100.0 (1.1 ppm)	•	•	•	•	•	•
G P.M.	*1.0*	•	100.0 (1.0 ppm)	•	•	•	•	•	•
H A.M.	*9.4*	95.7 (9.0 ppm)	4.3 (0.4 ppm)	0.0 (0.0 ppm)	•	•	•	•	•
H P.M.	*5.4*	98.2 (5.3 ppm)	1.8 (0.1 ppm)	0.0 (0.0 ppm)	•	•	•	•	•

Model results for Alternatives A and E-1, an Alternative A derivative, exceeded the 1-hour CO NAAQS for the morning period whereas none of the alternatives exceeded the 1-hour CO NAAQS for the evening indicating that the morning period was the limiting time period. The model results also revealed that the snowmobiles traveling in the express lane had the greatest contributions to the CO concentrations, over 98 percent, due to the high CO emission factors of the 5 miles per hour (MPH) traveling speed. Increasing the traveling speed to 15 MPH would have decreased the emissions by about 42 and 54 percent, respectively, and an exceedance of the 35 ppm NAAQS would not have occurred. The use of oxygenated fuel and low emission lube oil did not reduce the CO emissions sufficiently to prevent an exceedance of the 1-hour NAAQS. The low traveling speed of the snowcoaches, 5 MPH, had a large CO emission factor, but the snowcoaches had little impact on the estimated CO concentrations due to their substantially lower numbers.

Using the 0.75 persistence factor, only the Alternative A morning period vehicle emissions would have exceeded the 8-hour CO NAAQS. However, this is a mathematical operation that does not necessarily reflect reality. It is more likely for an exceedance of the 1-hour NAAQS to occur during the morning period and an exceedance of the 8-hour average NAAQS to occur in the late afternoon when stagnation conditions steadily intensify as demonstrated by the CO concentrations used to estimate the background CO concentration. On February 13, 1999, the hourly CO concentrations steadily increased to 8.1 ppm during 4:00 to 5:00 P.M. period, peaked to 18.1 ppm during the 5:00 to 6:00 P.M. period, then slowly decreased to 3.1 ppm for the 11:00 P.M. to 12:00 A.M. period. This pattern shows the strength of stable wintertime atmospheric conditions on the poor dispersion of CO and the impact of residual CO discussed previously.

The predicted morning hourly CO concentration calculated for Alternative A was almost 40 percent greater than the 31.0 ppm measured by grab bag sampling (DEIS). The predicted maximum 1-hour results represent a "worst case" scenario where the maximum emissions coincide with the worst dispersion conditions. Since the maximum emission scenarios only occur for a few hours each year the probability of these events occurring simultaneously is small. These events are a very high number of hourly snowmobiles (900+) with current emissions lined up at the park entrance traveling at low speeds, extremely stagnant wintertime atmospheric conditions with very low wind speeds essentially in line with the traffic lane, and the residual effect of high snowmobile activity that occurred during the previous hour. Given the ambient levels that have been reported to date and these modeling results, it is apparent that the potential for violations of the ambient CO standards is large. The greatest uncertainty in this analysis is probably the CO emission rate determination. Snowmobile emissions are not as well studied as automobile emissions and it is the Monitoring and Data Management Bureau staff's professional judgement that the actual emissions could easily be ± 30 – 40 percent more or less than those used in the modeling. Since the predicted result for the Alternative A morning scenario is nearly 40% greater than the CO standard, it is the opinion of the Monitoring and Data Management Bureau (MDMB) staff that if the current emission pattern persists and the CO monitor is left in place, a monitored violation will eventually occur

Although there were twice as many diesel buses in Alternatives B and C as gasoline vehicles, diesel engines are more efficient in cold weather than gasoline engines as reflected in their CO emission factors so their emissions were less. The use of ethanol in gasoline vehicles reduced the CO emissions by about 20%, but the effect on the CO concentrations were insignificant due to the low vehicle volumes.

A similar modeling analysis using CAL3QHC was performed by MDMB on an intersection in Kalispell (Malfunction Junction: U.S. Highways 2 and 93), Montana. For comparison purposes, the highest 1-hour CO concentration estimated for this intersection was 20.4 ppm in 1998 including a 2.0 ppm background value. The modeled average wintertime hourly traffic was about 3,140 total road vehicles. However, passenger vehicles have substantially lower traveling CO emission rates than snowmobiles and the road traffic at the intersection was traveling four different directions. At 25 mph, road vehicles emit around 45 grams/mile CO compared to 348 grams/mile for current snowmobiles, about 87 percent less. As an example, assume 600 snowmobiles traveled one mile at 25 mph. Over 4,640 road vehicles would need to travel the same speed and distance to emit the same amount of CO. Idling CO emission rates are over 50 percent greater for road vehicles (771 grams/hour) than for snowmobiles (395 grams/hour).

Additional modeling was conducted on Alternatives A (baseline), E-2 (Alternative A with 15 MPH vehicle traveling speed), and H (in which 80 percent of the snowmobiles would be electric). The maximum number of snowmobiles that could pass the entrance station per hour under each alternative emission activity before a 1-hour CO NAAQS and MAAQS exceedance would occur was determined. These numbers of snowmobiles for each alternative are listed in the following table.

Alternative	Maximum Number of Snowmobiles Before 1-Hour CO NAAQS Exceedance (35.0 ppm)	Maximum Number of Snowmobiles Before 1-Hour CO MAAQS Exceedance (23.0 ppm)
A	558	345
E-2	1,170	700
H	2,790	1,725

Regardless of the alternative, there was about a 60 percent difference in the number of snowmobiles between the two standards. This is about 6 percent less than the mathematical difference between the two standards. There was also about a 40 percent difference between the two alternatives, regardless of the standard showing the impact of 80 percent electric snowmobiles on the reduction of CO emissions.

CONSIDERATIONS AND POTENTIAL CONTROL STRATEGIES

Re-entrained road dust due to the wintertime application of sanding traction materials has been a prevalent springtime PM-10 problem in Montana causing exceedances of the PM-10 NAAQS; (PM-10 is particulate 10 microns or less in aerodynamic diameter). Limited application of sand for winter traction does occur in some areas in the Park and near Gardiner, but DEQ has no information available to determine if there is a re-entrained road dust problem at spring thaw. To prevent this problem, the characteristics of the sanding material (i.e. size, durability, etc.), the amount of sanding material applied, and the frequent removal (i.e., sweeping) of the material should be included in the analysis of Alternatives B and C. In addition, the effects of re-entrained road dust on the new PM-2.5 NAAQS is currently unknown; (PM-2.5 is particulate 2.5 microns or less in aerodynamic diameter). Although the PM-2.5 fraction in re-entrained road dust is probably small, it must be considered.

The release of CO from residential wood burning in West Yellowstone may have some impact on the CO measurements at the park west entrance. This portion of the measured CO concentration was considered part of the background CO concentration. Special ambient air monitoring must be conducted in Yellowstone Park before the impact from residential wood burning can be quantified. From studies conducted in other Montana communities by MADM, the contribution of CO from residential wood stoves during a wintertime day can vary from 20 to over 40 percent. Some past successful control strategies have been enforceable residential curtailment wood burning programs during high pollutant days and tax incentives or regulations for stove replacements with certified stoves of low CO emissions.

Requiring park entrance tickets to be pre-purchased and allowing relatively high vehicle speeds (25 mph or more) would substantially reduce CO emissions and may prevent violations of the state and federal standards.

Another control option discussed in the DEIS was the use of cleaner, alternate fuel technologies. Several new technologies are in various stages of development such as electric snowmobiles, 2-stage catalytic converters, 2-stroke direct fuel injection engines, 4-stroke engines for cold weather applications, and a biodegradable super-low emissions lubricant. The analysis of Alternative H shows what might be possible as these technologies develop

SUMMARY

The application of USEPA CAL3QHC provided a preliminary air dispersion modeling analysis of the wintertime carbon monoxide emissions at Yellowstone National Park west entrance from the vehicle activities of nine scenarios primarily outlined in the Winter Use Plan Draft Environmental Impact Statement for the Yellowstone and Grand Teton National Parks and John D. Rockefeller Jr., Memorial Parkway (DEIS). However, it was not a study that reflected actual events due to limited existing meteorological and snowmobile CO emissions data that contributed to a ± 30 – 40 percent confidence level, but the results can be used for comparative purposes. This "hot spot" or intersection model estimates the maximum 1-hour CO concentration at each inputted location and wind direction using broad on-site and meteorological assumptions. From limited on-site CO data, a 5.0 ppm background CO concentration was estimated. The highest trafficked morning and evening periods for the majority of alternatives were examined. From this analysis, the following conclusions were developed:

- Morning period Alternatives A and E-1, an Alternative A derivation, exceeded the 1-hour CO NAAQS. Snowmobiles traveling at very low speeds, 5 MPH, contributed over 98 percent to the CO concentrations due to the associated very large CO emission factors.

- Using oxygenated fuel with the low emission lube oil did not sufficiently reduce CO emissions and prevent an exceedance of the NAAQS at very low travel speeds, 5 MPH.

- Snowcoaches contributed less than one percent to the CO concentrations due to the low hourly volume even though their CO emission factors were high.

- Although there were twice as many diesel buses in Alternatives B and C, diesel engines are more efficient in cold weather than gasoline engines as reflected in their lower CO emission factors so their emissions were less.

- The use of ethanol in gasoline vehicles significantly reduced the CO emissions by 20%, but the concentrations were so low due to the vehicle volumes that the impact was low.

- NAAQS would not be exceeded if snowmobile speeds though the entrance station were increased to 15 mph.
- Up to 558 snowmobiles per hour could be admitted into the Park without violating the one hour CO NAAQS. MAAQS would allow up to 345 machines to enter per hour.
- There was about a 60 percent difference in the number of snowmobiles between the 1-hour NAAQS and MAAQS using the same alternative emissions scenario. This is about 6 percent less than the mathematical difference between the two standards.

- No definitive information on the 8-hour NAAQS could be obtained from the modeling analysis.

- Further air dispersion modeling using representative on-site meteorological data and snowmobile CO emission factors is necessary to adequately quantify the CO emissions from wintertime vehicles at the west entrance of Yellowstone National Park.

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WEST YELLOWSTONE NATIONAL PARK ENTRANCE ASSUMPTIONS

- 5 total lanes: at 12 feet wide each; Lane 5 is farthest from CO monitoring station.
- Morning Period: 4 lanes used (Lanes 2-5).
- Evening Period: 3 lanes used (Lanes 1-3).
- CO monitoring station to edge of road 3.5 meters (11.5 feet) and 25.6 meters (84 feet) west of a hypothetical centerline that runs through the center of the ticket booths north to south.
- The canopy over the ticket booths has no effect on the CO atmospheric dispersion.

VEHICLE ASSUMPTIONS

- All vehicles move at a constant rate when entering or exiting the park.
- No vehicle stopped when exiting the park.
- Cycle time for vehicles that simulate a roadway intersection, except for the snowmobiles: 68 total seconds, 60 seconds red and 8 seconds green.

- Cycle time for snowmobiles that simulate a roadway intersection: 30 total seconds, 24 seconds stop, and 6 seconds green time.

MODEL ASSUMPTIONS

- Assumed vehicular stoppage at the ticket booth simulates a signalized intersection.
- Worse case wind speed (1.0 meter per second).
- Averaging Time: 60 minutes.
- Wind Direction: every 5 degrees, 0 – 360 degrees wind is coming from

  (0 = positive Y-axis).
- Surface Roughness Coefficient: 2833.0 cm (fir forest).
- Flat Topography.
- Surface type: at grade.
- Settling Velocity: 0.0 cm/s.
- Number of Receptors: 17; along south vehicle entrance queue (morning period) and along the north exit queue. Receptor height = 1.8 m (height of normal man). Receptors are location where the CO concentration is calculated. These locations must be at least 3.0 meters away from the edge of the road. They cannot be placed inside the park entrance ticket booths.
- Source Height = 0.0 m (default).
- Stability Class: D (stable atmospheric condition).
- Atmospheric Mixing Height: 1,000 meters for morning and evening periods (default).
- Saturation Flow Rate was to the default (1600).
- Signal Type was set to the default (pretimed).
- Arrival type was to the default (random arrivals).

Low wind speeds and stable atmospheric conditions prohibit good dispersion of emitted CO away from its sources; low mixing heights keeps the carbon monoxide near the ground level.

ALTERNATIVES

The following is a brief description of each alternative:

Alternative A: No Action. No oxyfuels used.

Worse Case Morning Period: 8:00 – 9:00 A.M.

600 Gasoline Snowmobiles [1] in Express Lane 2 at 10 mph; traveling emission factor = 800.0 grams per mile (gm/mi.)

300 Gasoline Snowmobiles in Lanes 3 and 4 at 5 mph; traveling emission factor =1,000.0 gm/mi.

Idling emission factor = 395.00 grams per hour (gm/hr).

10 Gasoline Snowcoaches [2] in Lane 5 at 5 mph; traveling emission factor = 1,000.0 gm/mi.

Idling emission factor = 487.0 gm/hr.

4 18-Wheelers Diesel Trucks [3] in Lane 5 at 5 mph, traveling emission factor = 47.5 gm/mi.

Idling emission factor = 94.6 gm/hr.

Diesel trucks followed the snowcoaches in Lane 5.

Worse Case Evening Period: 5:00 – 6:00 P.M.

1000 Gasoline Snowmobiles in Lanes 1 and 2 at 25 mph; traveling emission factor = 348.0 gm/mi.

12 Gasoline Snowcoaches in Lane 3 at 25 mph; traveling emission factor = 243.1 gm/mi.

4 18-Wheelers Diesel Trucks in Lane 3 at 10 mph, traveling emission factor = 32.8 gm/mi.
Diesel trucks followed snowcoaches in Lane 3.

Alternative B: Only Wheeled, Public Shuttle Dies Busses Used (DEIS, Vol. I., Page 27).
Worse Case Morning Period 8:00 – 9:00 A.M.:
20 Light Gasoline Trucks [4] in Lane 2 at 10 mph; traveling emission rate = 109.9 gm/mi.
Idling emission rate = 487.0 gm/hr.
3 Snowplow [5] in Lane 2 at 10 mph; traveling emission factor = 32.8 gm/mi.
10 Gasoline Personal Cars [6] in Lane 3 at 10 mph; traveling emission factor = 92.7 gm/mile.
Idling emission factor = 371 gm/hr.
42 (40 passenger) Touring Diesel Buses [7] in Lane 4 at 10 mph; traveling emission factor = 32.8 gm/mi.
Idling emission factor = 94.6 gm/hr.
12 Gasoline Shuttle Vans [8] (15 passenger) in Lane 5 at 10 mph; traveling emission factor = 109.9 gm/mi.
Idling emission factor = 487.0 gm/hr.
Trucks follow snowplow in Lane 2.

Worse Case Evening Period: 5:00 – 6:00 P.M.
40 Gasoline Personal Cars in Lane 1 at 25 mph; traveling emission factor [5] = 34.7 gm/mile.
3 Snowplow in Lane 1 at 10 mph, traveling emission rate = 32.8 gm/hr.
20 Light Gasoline Trucks in Lane 2 at 10 mph; traveling emission rate = 74.5 gm/mi.

12 Gasoline Shuttle Vans in Lane 2 at 25 mph; traveling emission factor = 44.51 gm/mi.
42 Diesel Buses in Lane 3 at 10 mph; traveling emission factor = 32.8 gm/mi.
Vans followed Trucks in Lane 2.

Alternative C: Same as Alternative B, but use ethanol blend for all gas vehicles (DEIS, Vol. I, Page 30). All gasoline CO emission factors reduced by 20 percent.

Alternative D: same as Alternative A using given CO emission factors (DEIS, Vol. I, Page 10, Bishop and Stedman, 1999).

Alternative E-1: same as Alternative A with given CO emission factors (Revised Alternative E (9/27/99 – Wyoming), White and Carroll, 1998).

Alternative E-2: same as Alternative E-1 with All Vehicles [1, 2] traveling at 15 miles per hour (MPH) without stopping at the park entrance (Revised Alternative E (9/27/99 Draft – Wyoming).

Alternative F: no modeling due to no vehicles = 0.0 emissions.

Alternative G: Snowcoaches [2] used only.
Worse Case Morning Period 8:00 – 9:00 A.M.:

120 Gasoline Snowcoaches in Lanes 5 and 4 at 10 mph; traveling emission factor = 109.9 gm/mi. (DEIS, Vol. I, Page 36).

Worse Case Evening Period: 5:00 – 6:00 P.M.

120 Gasoline Snowcoaches in Lanes 1 and 2 at 10 mph; traveling emission factor = 109.9 gm/mi.

Alternative H: same as Alternative A, but with 80% Electric Snowmobiles.

This percentage was applied proportionally to the 600 entering snowmobiles without delay and 300 snowmobiles that stopped at the entrance (DEIS, Page 208 and Speech by Mike Finley, Superintendent, Yellowstone National Park, August 17, 1997 on CNN).

CO EMISSION FACTORS AND CALCULATIONS

Following snowmobile data provided by Howard Haines, DEQ.

Alternative A: Baseline Gasoline CO Emissions:

Vehicle Miles/Hour	Grams/Mile	Grams/Hour
0	NA [a]	395
5	1741	NA
15	580	NA
25	348	NA
35	249	NA

[a] NA = Not Applicable.

Ref: DEIS, p. 27, White et al., 1998.

Calculation for 10.0 mph: Graphed the 4 points on graphing paper. Estimated a curvilinear line through all 4 points since it is well known that this relationship exists between CO emissions and with vehicle speed (mph). An 800 gm/mi. emission factor was approximated and used.

Alternative D: NPS recommended level, about 40% of Baseline:

Vehicle Miles/Hour	Grams/Mile	Grams/Hour
0	NA [a]	158
5	696	NA
15	232	NA
25	139	NA
35	99	NA

[a] NA = Not Applicable.

Ref: DEIS, Vol. I. p. 27, 33.

Calculation for 10.0 mph: Graphed the 4 points on graphing paper. Estimated a curvilinear line through all 4 points since it is well known that this relationship exists between CO emissions and with vehicle speed (mph). A 360 gm/mi. emission factor was approximated and used.

Alternative Amended E: Oxygenated Fuel and Low Emission Lube Oil:

Vehicle Miles/Hour	Grams/Mile	Grams/Hour
0	NA [a]	277
5	1,388	NA
15	463	NA
25	278	NA
35	198	NA

[a] NA = Not Applicable.

Ref: White et al., 1998.

Calculation for 10.0 mph: Graphed the 4 points on graphing paper. Estimated a curvilinear line through all 4 points since it is well known that this relationship exists between CO emissions and with vehicle speed (mph). A 680 gm/mi. was approximated and used.

Snowmobiles: Needed 10 mph, given 5 and 15 mph, calculated average = 1,160.5. CAL3QHC CO emission limit = 1,000.00 therefore used 1,000.00 gm/mi.

[2] Bombardier High Altitude Light Duty Gasoline Truck for CO at 5.0 mph = 1,526.06 gm/mi., 25° F, 100% cold starts, calendar year = 1980 since the Bombardier that have no emission controls similar to pre-1970 V-8 and the tables do not precede 1980. Used maximum allowed CAL3QHC CO emission factor = 1,000.0 gm/mi. (Compilation of Air Pollutant Emission Factor – Volume II: Mobile Sources, Table J-27). Idling for CO = 487.0 gm/hr winter conditions: 30° F, 13.0 psi RVP gasoline (Emission Facts: Idling Vehicle Emissions). Appendix J High Altitude not available for 25.0 mph, but have Tables J-29 and J-30 High Altitude for 19.6 and 35.0 mph, respectively. Averaged the data for the two types of Snowcoaches and prorated based on number of each type. 10 Bombardier; High Altitude, Light Duty Gasoline Truck for CO at 25 mph = 293.46 gm/mi. (19.6 mph) + 192.72 gm/mi. (35.0 mph) = 486.18/2 = 243.1 gm/mi., 25° F, 50% cold starts 50% stabilized 50% hot starts, calendar year = 1980. Gasoline Snowcoaches in Lanes 1 and 2 at 10 mph; traveling emission factor = 109.9 gm/mi. (DEIS o. 38). No table available for 15 miles per hour (MPH). Graphed 5.0, 10.0, 19.5 and 35.0 MPH, 25° F, 100% cold starts, calendar year = 1980, and approximated 15 MPH = 630 gm/mi. (Compilation of Air Pollutant Emission Factor – Volume II: Mobile Sources, Tables J-27 - 30).

[3] 18-Wheelers Diesel Trucks High Altitude Heavy Duty Diesel Truck for CO at 5.0 mph = 47.51 gm/mi., 0 - 100° F, calendar year = 2000 (Compilation of Air Pollutant Emission Factor – Volume II: Mobile Sources, Table J-27). Idling: for CO = 94.60 gm/hr winter conditions: 30° F, 13.0 psi RVP gasoline, and using the Altitude High Adjustment Factor (3.182) = 301.02 gm/hr (Emission Facts: Idling Vehicle Emissions). High Altitude Heavy Duty Diesel Truck for CO at 10.0 mph = 32.76 gm/mi., calendar year = 2000 (Compilation of Air Pollutant Emission Factor – Volume II: Mobile Sources, Table J-28). No table available for 15 miles per hour (MPH).

Graphed 5.0, 10.0, 19.5 and 35.0 MPH, 0 - 100° F, calendar year = 2000, and approximated 15 MPH = 24 gm/mi. (Compilation of Air Pollutant Emission Factor – Volume II: Mobile Sources, Tables J-27 - 30).

[4] Light Duty Gasoline Truck (includes passenger vans) High Altitude for CO at 10.0 mph = 109.93 gm/mi., 25° F, calendar year = 2000, 100% cold stars (Compilation of Air Pollutant Emission Factor – Volume II: Mobile Sources, Table J-28). Idling: for CO = 487.00 gm/hr winter conditions: 30° F, 13.0 psi RVP gasoline (Emission Facts: Idling Vehicle Emissions). Light Duty Gasoline Trucks (includes passenger vans) for CO at 10.0 mph = 74.51 gm/mi., 25° F, calendar year = 2000, 50% cold starts 50% stabilized 50% hot starts (Compilation of Air Pollutant Emission Factor – Volume II: Mobile Sources, Table J-28).

[5] Snowplow, High Altitude Heavy Duty Diesel Truck for CO at 10 mph = 32.76 gm/mi., calendar year = 2000. (Compilation of Air Pollutant Emission Factor – Volume II: Mobile Sources, Table J-28). Idling for CO = 94.6 gm/hr winter conditions: 30° F, 13.0 psi RVP gasoline (Emission Facts: Idling Vehicle Emissions.

[6] Gasoline Personal Passenger Vehicle, High Altitude, Light Duty Gasoline Vehicle for CO at 10 mph = 92.7 gm/mi., 25° F, 100% cold start, calendar year = 2000, (Compilation of Air Pollutant Emission Factor – Volume II: Mobile Sources, Table J-28). Idling for CO = 371.0 gm/hr winter conditions: 30° F, 13.0 psi RVP gasoline (Emission Facts: Idling Vehicle Emissions). Appendix J High Altitude not available for 25.0 mph, but have Tables J-29 and J-30 High Altitude for 19.6 and 35.0 mph, respectively. Averaged the data: 41.61 gm/mi. + 27.83 gm/mi. = 69.44/2 = 34.72 gm/mi.,

25° F, calendar year = 2000, 50% cold starts 50% stabilized 50% hot starts.

[7] Diesel Buses, High Altitude Heavy Duty Diesel Vehicles for CO at 10 mph = 32.8 gm/mi., 25° F, calendar year = 2000 (Compilation of Air Pollutant Emission Factors – Volume II: Mobile Sources, Table J-28). Idling for CO = 94.6 gm/hr winter conditions: 30° F, 13.0 psi RVP gasoline (Emission Facts: Idling Vehicle Emissions).

[8] Gasoline (15 passenger) Vans that are 2 – 3 years old, High Altitude Light Duty Gasoline Truck for CO at 10 mph = 109.9 gm/mi., 25° F, 100% cold starts, calendar year = 2000 Compilation of Air Pollutant Emission Factors – Volume II: Mobile Sources, Table J-28). Idling for CO = 487.0 gm/hr hr winter conditions: 30° F, 13.0 psi RVP gasoline (Emission Facts: Idling Vehicle Emissions). Appendix J High Altitude not available for 25.0 mph, but have Tables J-29 and J-30 High Altitude for 19.6 and 35.0 mph, respectively. Averaged the data: 53.38 gm/mi. + 35.63 gm/mi. = 89.01/2 = 44.51 gm/mi., 25° F, calendar year = 2000, 50% cold starts 50% stabilized 50% hot starts.

Page 1. Re: Introduction and background. The NPS disagrees that there is a "lack of a clear management relationship between the GYA and the parks in the DEIS. The desired conditions for winter use described in the DEIS, for the three national park units closely follow the winter use goals as outlined in the *Winter Visitor Use Management: A Multi Agency Assessment (GYCC 1999 p.2)*. Because the scope of the DEIS is park specific and does not include the entire Greater Yellowstone Area (GYA), the desired conditions identified in that document should reflect that change in scope. In addition, the DEIS (as required by NEPA) underwent a separate specific scoping effort which identified issues and concerns specific to the 3 park units. It should also be noted that while the *Winter Visitor Use Management: A Multi Agency Assessment (GYCC 1999)* provides useful information and direction on winter use in the GYA, it is not a decision document and no NEPA analysis was performed. Despite the differences inherent in the two processes the DEIS presents a very clear relationship between parks and surrounding lands. The national forests of the Greater Yellowstone Area; the states of Montana, Idaho and Wyoming; and the five counties surrounding the 3 parks have been granted cooperating agency status. The cooperating agencies have participated in formulating the alternatives (see Appendix A, Volume II of the DEIS) and have provided an analysis of the effects of those alternatives on lands within their jurisdiction. That analysis can be found in the *Effects on Adjacent Lands* section of the DEIS on pages 298-309. The comments were also printed in their entirety in Appendix I, Volume II of the DEIS. These sections of the document will be updated as the national forests and other cooperating agencies further refine their analysis.
Page 1. Re: Analysis of off-road vehicles. Executive Order 11646 (as amended by EO 11989) defines off-road vehicles as "*any motorized vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, marsh, swampland or other natural terrain*" (see DEIS, Appendix C). The effects of snowmobile and snowcoach use on the travel corridors of the parks are disclosed for all alternatives including the no action alternative in Chapter 4 Environmental Consequences of the DEIS. The effects of other off-road wheeled vehicles, (as defined by EO 11646), were not analyzed in the DEIS because regulations require that in national parks off-road vehicles must operate only on routes specifically designated for their use. Except for snowmobiles, no such designations exist in the 3 park units (36 CFR 4.10).
Page 2. Re: Preferred alternative. An EIS is not, per se, a scientific analysis. It is intended to disclose environmental effects over a range of alternatives, in which the analyses must demonstrate scientific integrity by disclosing methods and making explicit references to sources used (40 CFR 1502.24). The DEIS does this. CEQ regulations also allow for incomplete or unavailable information, by describing procedures that are to be followed in these instances (§1502.22). Any identified gaps in the FEIS will follow the requisite procedures. Also, there is no requirement in CEQ regulations (§1502.14) to justify a preferred alternative, just to name one or more alternatives as preferred in the DEIS if there is a preference. The agency must express a preferred alternative in a Final EIS. The effects of the alternatives on park values such as air quality, natural soundscapes, and visitor experience have been analyzed in the DEIS on pages 157–327.
Page 2 Re: Page 7, Facility Issues. The scope of the Winter Use Plan DEIS for Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway is limited to an examination of a range of alternatives and the associated impacts of winter visitor use (see §1500.4). Activities that occur in the summer, are outside the scope of the DEIS except where their impacts are additive to those occurring in the winter. The effects of those types of actions are considered cumulative (§1508.25(c)) and are disclosed in the DEIS on pages 319-327.
Page 2 Re: Desired conditions. The reference to snowmobile sound and emission levels on page 4 is a typographical error. The bullet should read "Oversnow vehicle sound and emission levels are reduced to protect public and employee health and safety, enhance visitor experience and protect natural resources."
Page 2 Re: Page 4, Existing conditions. Visitors to the national parks generally come because they are seeking a certain type of experience. Because the basis of any visitor experience is empirical a visitors comment on that experience is often expressed as an opinion.
Page 2. Re: Desired condition. The statements outlined under the *Desired Condition* heading of the DEIS are described as issues and concerns that are unresolved, that is, there is some contention as to whether the concern is valid or not. Alternatives were formulated in order to provide clear definition of these issues. The effects of these alternatives and the degree to which they achieve the desired condition are assessed in the environmental consequences section of the DEIS. It is appropriate to express these unresolved issues or areas of disagreement, (including professional opinion) as a facet of the existing condition.

Indeed, these areas of disagreement are one of the primary indicators that a comparative analysis is required in order to meet the desired condition. This will be clarified in the FEIS.
Page 2. Re: Concern for groomed road access. As noted in the DEIS several surveys have indicated that existing winter users expressed strong support for maintaining groomed trails in the parks. The State of Montana also notes correctly that users responding to this survey are not the only indicators for meeting the desired condition that should be used. Under the no action alternative approximately 184 miles of road are groomed. Under alternative B (preferred alternative) 154 miles of road would be groomed, a reduction of 15%. The NPS disagrees that the concern for groomed road surfaces is not addressed or is contradictory to the preferred alternative.
Page 2. Re: Sewage treatment capacity. Recently Yellowstone has completed an environmental assessment on a sewage treatment facility at Old Faithful. Because these facility issues are site-specific year round concerns they are typically addressed in separate implementation level environmental assessments (see 1508.18(B).
Page 3. Re: State of Montana's special expertise. The text describing the special expertise of the State of Montana will be edited to include air and water quality.
Page 3. Alternative B would provide for visitor access from West Entrance to Old Faithful via mass transit shuttle busses, which would reduce the number of vehicle miles traveled from West Yellowstone by nearly 80 % (see DEIS page 202). Because the transit system would be operating under permit from the NPS these busses can be required to fuel their vehicles outside the park if a fuel shortage should arise in the park. The same is true for alternative G. Efforts were made in each alternative to rely on surrounding gateway communities for support services.
Page 3. Re: Air quality. This section will be clarified in the FEIS.
Page 3. Re: Air quality. This section will be clarified in the FEIS.
Page 3. Re: Air quality. Additional air quality modeling for CO for all alternatives will be included in the FEIS.
Page 3. A clarification as to the cause of bison removals will be made in the FEIS.
Page 4. Re: Summer/Winter use comparisons. The scope of the Winter Use Plan DEIS for Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway is limited to an examination of a range of alternatives and the associated impacts of winter visitor use (see §1500.4). Activities that occur in the summer, are outside the scope of the DEIS except where their impacts are additive to those occurring in the winter. The effects of those types of actions are considered cumulative (§1508.25(c)) and are disclosed in the DEIS on pages 319-327. A description of winter facilities is provided on page 140-141. CEQ regulations encourage the authors of NEPA documents to reduce excessive paperwork by emphasizing portions of the environmental impact statement that are useful to decision makers and the public and reducing emphasis on background material (See § 1500.4 (f)). It is unclear from the comment how an additional discussion of changes in fees and changes to summer travel corridors (other than that provided in the introduction and affected environment) would further define a winter use issue, help to clarify the analysis or provide useful information to the decision maker.
Page 4 Re: EIS process. Recently Yellowstone has completed an environmental assessment on a sewage treatment facility at Old Faithful. Because these facility issues are site-specific year round concerns they are typically addressed in separate implementation level environmental assessments (see 1508.18(B).
Page 4. Re: Scope of the plan and EIS. The stated purpose and need for action defines the desired conditions for winter use for the 3 park units. The scope of the winter use planning effort identified in the DEIS was limited for practical reasons to the 3 park units. Since the alternatives are formulated to respond to the purpose and need, they necessarily exclude those lands outside the jurisdiction of the NPS (§1502.14(c). Although CEQ regulations allow an agency to consider an alternative that includes actions outside its jurisdiction this was considered to be impractical, in this case, for the following reasons. In response to a lawsuit filed by The Fund For Animals and others in 1997 the NPS agreed to prepare a comprehensive EIS, pursuant to NEPA, addressing a full range of

STATE OF MONTANA
alternatives for all types of winter visitor use, including snowmobiling and trail grooming, in the parks and considering the effects of those alternatives on the parks' environments. The agreement also specified a completion date of the FEIS ofSeptember 1, 2000. In order to provide meaningful analysis for the public and decision-makers within the agreed upon timeframe it was essential that the scope of the document be limited to the specifications of the settlement agreement.
Page 4. Re: Management zones. The management prescriptions describe the potential range of desired resource conditions and visitor experiences. These prescriptions are not comparative, that is they are not intended to define the differences between existing and desired conditions. They are intended to describe the desired condition for that zone. Therefore, to describe air quality as good to excellent is appropriate. In response to your comment these terms will be further defined in the FEIS. In addition to the park's responsibilities under the Clean Air Act, clean air is a park value that is highly regarded by park visitors. It would not be appropriate to identify a parameter of "the maximum allowed by law (approaching exceeding NAAQS standards)" as the *desired condition* for any zone within the parks.
Page 4. Re: Management zones. Please see the previous response. The management zone describes the parameters that will guide the future management for that zone. The purpose of the management zones is to ensure a diversity of appropriate visitor experiences and to help set up carrying capacity decisions. If, as you suggest, park visitors along these roadways are exposed to a high level of bus exhaust, the NPS agrees that the park visitor may not experience a "sense of being in a natural environment". Consequently, park mangers might pursue visitor management actions (i.e. park passes, reservations, use limits etc.) to ensure that the identified desired resource conditions for those zones are met. The purpose of the management prescriptions will be further clarified in the FEIS and a description of carrying capacity studies will be incorporated.
Page 5. Re: Scientific studies and monitoring. Published studies and monitoring reports should as a matter of course be available to the public. For obvious reasons, this information should not be subjected to a political process in advance of their publication. There are policies and protocols already in place to ensure appropriate scientific review. If future studies or monitoring indicate the need for management action, NPS will follow the requirements already set in law (such as NEPA), regulation and policy. At that time, the scientific basis for an action can be scrutinized and criticized by any interested parties.
Page 5. The standards for visitor experience and resource condition for each zone described in each alternative are outlined on Table 2 in the DEIS. On page 25 of the DEIS under *Actions and Assumptions Common to all Alternatives* the text states that further studies will be necessary to set indicators and further define the standards for achieving the desired visitor experience and resource condition and that if necessary the parks will implement techniques such as reservations, permits and differential fees. This process will be further clarified in the FEIS. (The State of Montana has not been sent a protocol for determining indicators and carrying capacities for the 3 parks because it has not yet been developed.)
Page 5. Re: Cooperating agencies and review of modeling and other information. The NPS disagrees that the State of Montana has not received data, and other information relating to the proposed action and its alternatives in the DEIS. The planning record will show that studies that have been prepared by the NPS for the DEIS and that relate to the cooperating agencies areas of expertise were sent to each of the cooperating agencies for their review. In some cases the NPS funded state designated peer reviewers to review the models and surveys utilized in the analysis.
Page 5. Re: EPA emission standards. The suggestion to use EPA standards for vehicles entering the park in alternative G will be incorporated into the alternative. The suggestion to utilize the EPA method of emission testing (mass of pollutant per unit of power) under alternative G has merit. The alternative feature will be edited in the FEIS. Peak day information will be included in the environmental consequences section for alternative G in the FEIS.
Page 5. Re: Numbers of snowcoaches. This clarification will be added to the description of the environmental consequences of this alternative
Page 5-6. Re: Rationale for the preferred alternative. The preferred alternative is not a decision but is the agency's preferred course of action at the time a draft or final EIS is released. The purpose of identifying the preferred alternative is so that agencies and the public can understand the lead agency's orientation (§1502.14(e)).

STATE OF MONTANA
Page 6. Re: Public access to the parks. The preferred alternative identified in the DEIS does not ignore the "overwhelming public preference on access to the park" and at the time of the writing of the DEIS appeared to be the most responsive to the criteria stated on page 38-39. All roads identified as open to motorized travel under the no-action alternative are open under the preferred alternative. The preferred alternative also adds an additional 6 miles of motorized access and 10 miles of groomed non-motorized access. The preferred alternative identifies 154 miles of groomed snow road, only 30 miles less than the no-action alternative. As identified on page 218 capacity levels at the Old Faithful area would remain the same as in no action. The preferred alternative adds the ability to access Old Faithful via a plowed road, *as well as* via an oversnow road, thus increasing opportunities for different types of access. Partly in response to the overall non-support of plowing this section of road, the NPS expresses a new preferred alternative in the FEIS which allows for oversnow access throughout the park by snowcoach.
Page 6. Re: Mandated topics. §1502.16(e) requires that an EIS include a discussion of the energy requirements and the conservation potential of various alternatives and mitigation proposals. The NPS is unaware of a mandate that does not allow the decision-maker to select an alternative that uses more energy than the no-action alternative. Alternative B proposes mass transit on the road sections from West Entrance to Old Faithful. These sections currently receive the most use during the winter. Given current use this alternative reduces the number of vehicle miles traveled by a factor of 8, it is unclear how alternative B would increase the amount of energy used over alternative A. The NPS will review the commenters concerns that energy consumption would be substantially greater under one alternative than another and will make appropriate changes to the FEIS.
Page 6. The dispersal of exotic species is a problem that accrues to year-round use in the national parks. On the whole, the portion of this problem to be attributed to winter use is very small – considering that the major dispersal agent is the use of horses from park trailheads and trailheads on adjacent public lands. The Park Service's judgment is that this is not a significant issue worthy of study in this EIS.
Page 7-8. Re: Regional economy. The information provided will be considered in revising the economic assessment.
Re: Recreation sector and park visitors. The information provided will be considered in revising the economic assessment.
Re: Nonmarket values. Editorial changes regarding nonmarket values will be made in the FEIS
Re: Air quality and public health. Editorial changes will be made to clarify the issues of ambient air quality standards and personal exposure levels value in the FEIS
Page 9 Re: Air quality and public health. Editorial changes will be made that describe snowcoach emissions in the FEIS.
Page 9 Re: Air quality and public health. Editorial changes will be made that clarify the methods used for measuring ambient air quality standards on Montana.
Page 9 Re: Air quality and public health. Editorial changes will be made that clarify the methods used for measuring ambient air quality standards on Montana. Clarification will be made in the DEIS
Page 9 Re: Air quality and public health. Editorial changes will be made that clarify the air quality analysis. Additional work is being accomplished on air quality and public health and appropriate changes will be incorporated into the FEIS.
Pages 9-11. Re: Air quality and public health. Additional work is being accomplished on air quality and public health and appropriate changes will be incorporated into the FEIS.
Page 11. Re: Public Safety. NPS acknowledges that snowmobile traffic sharing a road surface with wheeled vehicles is a potentially hazardous situation. Your comment does not indicate how alternative B would cause this problem to increase. The NPS will review and if appropriate disclose this effect in the adjacent lands section of the FEIS.
Page 11. Re: Air quality and public health. The text of the FEIS will be edited to reflect the additional source of pollutants.
Page 11-12. Re: Air quality. Additional work is being accomplished on air quality and appropriate changes will be incorporated into the FEIS.
Page 12 Re: Bison. The FEIS will include additional information on the brucellosis issue. The term "perceived risk" was removed.
Page 13 Re: Comment noted. A correction will be made in the FEIS.

STATE OF MONTANA
Page 13 Re: Bison management actions. Comment will be incorporated in the FEIS.
Page 13. Re: Untested Meagher theory. The bison analysis will be reviewed and updated as necessary. In an effort to better understand the relationship of bison movements and the use of the winter groomed road system, managers have instituted studies that address this issue. While groomed roads may have contributed to the redistribution of bison within park boundaries (Meagher 1997), it appears that bison tend to use waterways and off-road trails for much of their travel on the west side of the park (Bjornlie and Garrott 1998), and that much of their movement toward park boundaries may occur on such routes. Monitoring of bison movements in the Hayden Valley and Mammoth to Gibbon Falls sections of the park has found that less than 12% of bison movements occurred on the groomed road surface (Kurz et al. 1998, 1999). However, groomed roads may have allowed larger numbers of bison to exist in the park than in the absence of groomed roads, by allowing access to otherwise unavailable foraging areas, and westward redistribution early in the winter may predispose some bison to exit the park (Meagher 1997). Therefore closing of groomed roads could have the effect of reducing population size and shifting distribution back to patterns observed before grooming, thereby possibly reducing the magnitude of bison movements outside park boundaries. Conversely, bison are highly social and appear to retain and pass along knowledge through generations (Meagher 1985), so it is possible that closing groomed roads may not impact bison movements and distribution. Research is currently being conducted to better understand the relationship between road grooming and bison movement and distribution patterns.
Page 13. Re: NAS Review of Brucellosis. Comment noted. Reference to the NAS report will be made in the FEIS.
Page 13. Re: Aune 1981. Aune's work is cited in Chapter 4 "Environmental Consequences" Much of his work did demonstrate that recreation impacts wildlife.
Page 14. Citation from Aune will be incorporated into the FEIS.
Page 14. A correction will be made in the FEIS regarding lynx distribution.
Page 14-15. Re: Assumptions and methods. Additional work is being accomplished on air quality and appropriate changes will be incorporated into the FEIS.
Page 15. Re: West Entrance relocation. This suggestion will be incorporated as a mitigation measure into alternative E.
Page 16. Re: Public Safety Assumptions and Methodologies. The effect on visitor safety of different types of winter users, primarily skiers and snowmobilers sharing the same road surface was identified during public scoping. The identified concern is a result of the great difference in the rate of speed of these different user groups: one slow and one fast. If you separate two user groups you will eliminate the danger that a collision between them will occur. The assumption stated on page 162 is valid.
Page 16. Re: Public Safety Assumptions and Methodologies. This assumption has not been utilized to indicate a level of effect in the preferred alternative. The effects of an increase in winter use on lands outside the 3 park units are discussed on pages 298-315. The USFS is revising the analysis of winter visitor displacement and that information will be incorporated into the FEIS.
Page 16 Re: MTBE. Additional work is being accomplished on water resources and appropriate changes will be incorporated into the FEIS.
Page 16 Re: Nitrate. Additional work is being accomplished on water resources and appropriate changes will be incorporated into the FEIS.
Page 16 Re: EPA regulations. Additional work is being accomplished on air quality and appropriate changes will be incorporated into the FEIS.
Page 17 Re: Ethanol fuels. This feature is in the range of alternative features analyzed, and will continue to be an option for management.
Page 17 Re: Pre-paid passes. Pre-paid passes are available in West Yellowstone. Should the need arise at other gates for the same reasons, the service could be expanded. The rationale for this measure – mitigating pollution impacts on visitors and employees – has a cost associated with it. Opportunities for necessary NPS-visitor contact at the gate are lost. Suggesting that all visitors forego an important safety element of the park experience, so that their snowmobiles will be less polluting is clearly not in compliance with 36CFR 2.18. The regulation states that snowmobiles are prohibited except where designated and only when their use is consistent with the park's natural, cultural, scenic and aesthetic values, safety considerations and will not disturb wildlife or damage park resources. In this case, mitigating an effect on park values and resources by completely *eliminating* an important information and safety resource for park visitors is

STATE OF MONTANA
illogical. Voluntary compliance with this management option is reasonable, but only for those visitors who wish to utilize it.
Page 17 Re: NAAQS violations. Additional work is being accomplished on air quality and appropriate changes will be incorporated into the FEIS.
Page 17 Re: Public Health. This information will be included in the FEIS.
Page 17 Re: Public Health. This information will be included in the FEIS
Page 17-18. Re: Water Resources. Additional work is being accomplished on water resources and appropriate changes will be incorporated into the FEIS.
Page 18 Re: Biodegradable lubricants. This feature is in the range of alternative features analyzed, and will continue to be an option for management.
Page 18-19. Re: Air Quality. Additional work is being accomplished on air quality and appropriate changes will be incorporated into the FEIS
Page 19. Re: Lynx abundance. The statement regarding lynx abundance will be revised in the FEIS.
Page 19. GYA regional economy. NPS has set the context for the decision to be made at the level of the GYA region. This is entirely appropriate – witness the comments of all cooperating agencies that this is a regional concern, not just a community concern. Comments about the rationale for the preferred alternative are taken out of context, and are given too much weight; the rationale for the preferred alternative does not set the scope of analysis. NEPA (CEQ Regulations) does not make stipulations about the rationale for selecting a preferred alternative in an EIS; in fact there is no requirement for stating the rationale in an EIS. It stipulates that in a final EIS, a preferred alternative must be identified. The statement of preference for one or more alternatives in a draft EIS is discretionary, depending upon whether the agency has a preference at that point (§1502.14(e)). The identification of a preferred alternative in a DEIS should be regarded by the public as extremely tenuous. This is because an EIS is to serve as a means of assessing impacts of proposed agency actions "rather than justifying decisions already made" (§1502.2(g)). The FEIS preferred alternative may be viewed more as a "precursor" decision, which will only become final in a Record of Decision that expresses the rationale for the choice. In any case, it is clear that merely the expression of a preferred alternative, by itself, can in no way invalidate the entire EIS analysis. The decision-maker can select any of the offered alternatives in a Final EIS through consideration of a variety of factors, including but not limited to environmental impacts. The selected alternative does not have to be the most environmentally preferable alternative, which must also be revealed in the decision document.
Page 20. Re: Alternative B's major impact. It appears too much emphasis is placed on support or justification for a course of action or decision. See discussion on disclosure of a preferred alternative, above. Under the CEQ regulations, the requirement in an EIS is to provide a range of reasonable alternatives that clearly define the issues, and to fully evaluate and disclose the possible effects of those alternatives. The DEIS meets this requirement, while acknowledging that the commenter disagrees about many of the impacts disclosed. In general, the expressions of opposition relate to the decision that the commenter would like to see NPS make, based on myriad disagreements about the effects disclosed in the DEIS. The general response to such comments is that the commenter's opinions will be considered in making the final decision, but that there is nothing in those opinions that substantively would alter the range of alternative features to be evaluated in the Final EIS. For example, if the features that are not supported were to be deleted from the range of alternatives then the analysis would be left only with features that the commenter likes or agrees with. If only the actions that are liked by the commenter remain, then there is effectively only one alternative. Therefore, expressions of support or objection will not be responded to, in general, by changes in alternative features – they will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision. People who commented in this fashion are asked to consider that there is a very clear separation between alternatives legitimately considered in an analysis and the expression of a preferred alternative or the decision to be made.
Page 20. In part due to the low public support for one feature of alternative B, plowing the road from West Yellowstone to Old Faithful, NPS will change its FEIS preference to alternative G.
Pages 20-21. Re: Plowed road proposal. The commenter perceives the rationale incorrectly. The stated purpose of plowing the road (DEIS, page 28) is to "improve affordable access" – not, as this and other commenters state, to "provide affordable access for minority and low-income people." A thorough reading of the EIS would reveal that a required impact topic in an EIS is to evaluate the effects of a proposed action on socially or economically disadvantaged

[illegible]
populations (DEIS, page 80). These populations are characterized on page 90 in the DEIS, and the effects on those populations are disclosed in the socioeconomic section for each alternative (DEIS, pp 176, 199, 224, 245, 260, 274, 288). We disagree that this analysis is "extremely flawed"; the stated impacts on socially or economically disadvantaged populations are not used as "justification" for plowing in alternative B. The rationale for preferring alternative B may be found on page 39.
Page 22. Re: Public safety outside the parks. NPS is concerned about public safety outside the parks. As an example, Grand Teton National Park personnel respond to winter accidents involving snowmobiles, et al, on Togwotee Pass. NPS asked all cooperating agencies to provide assessments of impacts on adjacent lands and jurisdictions. These assessments are disclosed in the DEIS on pages 298-315. In particular, for Montana, this point is made on page 311. It appears that the situation involving travel from West Yellowstone to Big Sky and Taylor Fork, and return, is hazardous regardless of any management decision by NPS.
Page 23. Re: Tunnel effect of plowed roads on bison. Pages 182 and 208-09 in the DEIS discuss the impact of snow berms on ungulates. Although the DEIS does not use the term "tunnel effect" it does discuss the negative impact associated with snow berms along the plowed road corridor, and suggests mitigation (p. 209). NPS and the commenter disagree on whether or not a tunnel effect would result from plowing. In many other areas within and near the three park units, roads are plowed and no tunnel effect exists.
P. 23. Re: Mitigation measures for snow berms. Page 209 in the DEIS discusses creating turnouts in the snow berms for wildlife to exit the road corridor.
P. 23. Re: NAS report. The FEIS will incorporate the findings of the NAS report.
P. 23. Re: Effects of groomed trails on bison energetics. The bison analysis will be reviewed and updated as necessary. In an effort to better understand the relationship of bison movements and the use of the winter groomed road system, managers have instituted studies that address this issue. While groomed roads may have contributed to the redistribution of bison within park boundaries (Meagher 1997), it appears that bison tend to use waterways and off-road trails for much of their travel on the west side of the park (Bjornlie and Garrott 1998), and that much of their movement toward park boundaries may occur on such routes. Monitoring of bison movements in the Hayden Valley and Mammoth to Gibbon Falls sections of the park has found that less than 12% of bison movements occurred on the groomed road surface (Kurz et al. 1998, 1999). However, groomed roads may have allowed larger numbers of bison to exist in the park than in the absence of groomed roads, by allowing access to otherwise unavailable foraging areas, and westward redistribution early in the winter may predispose some bison to exit the park (Meagher 1997). Therefore closing of groomed roads could have the effect of reducing population size and shifting distribution back to patterns observed before grooming, thereby possibly reducing the magnitude of bison movements outside park boundaries. Conversely, bison are highly social and appear to retain and pass along knowledge through generations (Meagher 1985), so it is possible that closing groomed roads may not impact bison movements and distribution. Research is currently being conducted to better understand the relationship between road grooming and bison movement and distribution patterns.
P. 23. Re: Energetic value of walking on groomed roads. If the issue is the effect of groomed surfaces on the energy balance of individual animals, as is the intent of the DEIS discussion, then groomed surfaces by themselves allow animals to save energy. This is why they use the surfaces, and it is apparently to their benefit. The DEIS also makes the point that recreation use of groomed surfaces contributes to stress and energy expenditures by animals. The larger issue – given the balance of energy savings vs. energy loss – is if and to what extent these circumstances constitute an impairment of park values. The total picture – groomed routes, type and amount of use, stressful periods for wildlife, availability of forage – needs to be considered in the final decision. The goal of natural regulation applies to whole populations, not individuals, and must factor in the presence of people.
P. 24. Re: Bison movement from Tower to Mammoth and from 7-mile Bridge to West. The FEIS will include some of the information cited in Aune et al 1997.
P. 24. Re: Effects of nonmotorized use on ungulates. The statement regarding the effects of nonmotorized use on ungulates will be revised in the FEIS.
Page 25. Re: Effects on public health. Modeling of air quality impacts, including consideration of Montana's estimates, will be incorporated into the FEIS.

Additional air dispersion modeling for CO for all alternatives will be included in the FEIS.
Page 25. Re: Water Resources. Additional work is being accomplished on water resources and appropriate changes will be incorporated into the FEIS.
Page 25-26. Re: Air quality. Modeling of air quality impacts, including consideration of Montana's estimates, will be incorporated into the FEIS. Although alternative C (as well as alternative D) proposes selling 10 percent ethanol fuel and synthetic low emissions lubricants in the park, this does not ensure that all snowmobiles would operate on these products.
Pages 27-28. Effects on national forests were provided by USFS personnel. This section will be adjusted in accordance with USFS comments on the DEIS.
Page 29. Re: Effects on states. NPS will incorporate the suggested information into the FEIS.
Page 29. Re: Relationship between local short-term uses and long-term productivity. In order for the suggested impacts on lands far beyond park boundaries to be assessed, it would first be necessary for the states to provide an assessment of the current impacts of snowmobiling, or other winter uses, on those lands. NPS cannot be expected to perform this analysis without some assistance from Montana. The NPS is not aware whether such needed assessment information is available from the state of Montana.
Page 29. In order for the suggested impacts on lands far beyond park boundaries to be disclosed, it would first be necessary for the states to provide an assessment of the current impacts of snowmobiling, or other winter uses, on those lands. NPS cannot perform this analysis without assistance or information from Montana. The NPS is not aware whether such needed assessment information is available from the state of Montana. NPS has the impression from this series of comments (i.e., short-term vs long-term, cumulative effects) that Montana, as well as lands in other states, is at or approaching a threshold of snowmobile use. This conclusion is drawn from the implication that any changes in snowmobile use in the parks could distribute unwanted additional use to adjacent lands and have important negative effects. It is also at odds with the suggestion that closing portions of the parks to snowmobiling would have the negative effects on local communities – if people will still come to those communities to snowmobile and place local resources at risk. Such inconsistencies and the unavailability of data, make it difficult to respond effectively to the comment.
Pages 30-31. Potential cumulative impacts on national forest lands are discussed on pages 326-327 of the DEIS. NPS believes the cumulative effects analysis is sufficient to provide information for the decision to be made. Any additional input received from cooperating agencies, in accordance with their special expertise, before the preparation of the FEIS will be incorporated into it.
P. 31. Re: Threatened and Endangered Species. Potential cumulative impacts to T&E species associated with winter recreation will be more fully discussed in the FEIS. Again, input from cooperators is necessary for the NPS to formulate a comprehensive analysis on areas of concern outside the parks.
P. 32. Re: Species of Special Concern. Potential cumulative impacts to species of concern associated with winter recreation will be more fully discussed in the FEIS. Again, input from cooperators is necessary for the NPS to formulate a comprehensive analysis on areas of concern outside the parks.
Page 32. Appendices. Clarifications on indicated pages will be made in the FEIS.
Attachment to letter: Montana's Proposed Preferred Alternative. Montana's proposal is not significantly different from alternative E as presented in the DEIS, especially considering the programmatic nature of the proposed action. Features proposed by Montana are for the most part considered within the range of DEIS alternatives, and will continue to be available for selection by the decision maker following publication of the FEIS. Other recommended features are more site-specific than programmatic, or have been dismissed with rationale. See the matrix comparison of Revised Alternative E, which resembles Montana's alternative, versus the features analyzed in the DEIS. All alternatives in the DEIS meet the purpose and need for action to a greater or lesser degree. For any alternative that incorporates an adaptive management process as its chief feature, the Final EIS will be modified to include more explanation of that process and its resource focus.

STATE OF WYOMING
OFFICE OF THE GOVERNOR

JIM GERINGER
GOVERNOR

STATE CAPITOL
CHEYENNE, WY 82002

November 29, 1999

Karen Wade, Director
Intermountain Region
National Park Service
P.O. Box 25287
Denver, CO 80225-0287

Dear Karen:

As a cooperating agency on the Winter Use Environmental Impact Statement (EIS) for Yellowstone and Grand Teton National Parks and the John D. Rockefeller Memorial Parkway, the State of Wyoming submits the attached comments on the Winter Use Plan / Draft Environmental Impact Statement.

I repeat my appreciation to the National Park Service (NPS) for naming Wyoming, Montana, Idaho and the five surrounding counties as cooperating agencies. While the process has continued to be frustrating for everyone, we hope this ground-breaking exercise proves to be beneficial in the long-term to these national park areas and the surrounding states and counties.

We have previously expressed concerns in numerous letters during the process that NPS has unrealistically constrained the deadlines on this project due to court settlement. The lack of adequate time to properly produce this EIS is indicative of a flawed process which will likely result in an inadequate scientific document. Our review of the DEIS only reaffirms this concern. Nonetheless, our Wyoming Team has made every effort to provide a complete-as-possible analysis of this document given the relatively short deadline for a project of this magnitude. We request that NPS pay appropriate attention to these comments which we offer as a cooperating agency.

The State of Wyoming does not support the NPS's "Preferred Alternative B" nor any of the other six proposed alternatives, as written. There is inadequate science connected to many of the management alternatives which are being proposed in the DEIS. The best solution to the issues is a "Revised Alternative E" which would focus on an adaptive planning approach while taking advantage of independent third-party review and input from an advisory committee. The "Revised Alternative E" which we support is discussed in-depth in our attached comments.

The State of Wyoming continues to offer our resources to NPS as you work toward producing the Final EIS. We look forward to continuing to work with you on the preliminary Final EIS document.

Best Regards,

Jim Geringer

Jim Geringer
Governor

JG/kr
attachment
cc: Wyoming Congressional Delegation
Governor Marc Racicot
Governor Dirk Kempthorne
Cooperating Counties
Clifford Hawkes, NPS Job Captain
Kim Raap, Wyoming Trails Program Manager
Wyoming Office of Federal Lands Policy

12/2/99

Clifford Hawkes
DSC

…n Office (*)
Crowley
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Frost
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Holderman
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STATE OF WYOMING COMMENTS ON THE WINTER USE PLAN/ DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR YELLOWSTONE AND GRAND TETON NATIONAL PARKS AND JOHN D. ROCKEFELLER, JR. MEMORIAL PARKWAY

11/29/99

INTRODUCTION

The State of Wyoming (Wyoming) is providing a complete-as-possible analysis of this DEIS, given the relatively short deadlines for a project of this magnitude, in a good faith attempt to meet our obligation as a cooperating agency. We have previously expressed concerns that the National Park Service (NPS) has unrealistically constrained the deadlines on this project due to court settlement and that the lack of adequate time to properly produce this EIS is indicative of a flawed process which will likely result in an inadequate scientific document. Our review of the DEIS only reaffirms this concern. The information gaps are wide and there is a clear lack of science connected to justifying many of the management changes which are being proposed within the various Alternatives, and particularly by "Preferred Alternative B".

Chapters 1 and 2 of our comments discuss in detail our support for or opposition to, respectively, the numerous management options proposed in Alternatives A thru G in the DEIS. No single Alternative is acceptable in its entirety, as proposed by NPS, since all have one or more "poison pills" which make them unacceptable to proper winter management from our perspective. In these two chapters, we will attempt to convey which actions we believe would be beneficial to future park management and which we believe would be detrimental to properly balancing visitor use and natural resource management.

Because of the noted information gaps and lack of good science in the DEIS, it is our position that the only logical management option which can be supported is a *Revised Alternative "E"*. The *Revised "E"* which we support would use an Adaptive Planning Approach to fill the information gaps which exist in the DEIS by incorporating the results of new and on-going research and monitoring, as it becomes available, into winter park management decisions. However, all research and monitoring used in this Adaptive Planning Approach should be guided by independent third-party review to ensure good, unbiased study design and proper interpretation of data. Additionally, this Adaptive Planning Approach should also be guided by an Advisory Committee, appointed by the Secretary of the Interior, and comprised of representatives from user and conservation groups, the cooperating agencies, the Park Service, and other state and federal experts. The role of the Advisory Committee should be to recommend priorities to the Park Service for the on-going monitoring and research efforts related to both winter visitor and natural resource management, to assist them with proper research study design, and to recommend phasing and implementation schedules for new management actions which result from an Adaptive Planning Approach. In Chapter 3, the *Revised Alternative "E"* which we support is discussed in detail.

Existing Alternative "E" is inadequate because it does not clearly articulate the purpose and need for this EIS. Absent a clear definition of the problem, it is not possible to design an adaptive management strategy to correct it. It should be revised to include a clear definition of roles and responsibilities of the advisory committee, to include participation in adaptive management, and also a definition of an adaptive management framework to include processes to first identify and then implement corrective actions for specific problems, including compliance with NEPA. The Revised "E" should be designed by NPS to address a revised purpose and need, i.e. recognition that winter visitor use in the parks has increased; recognition that there is uncertainty about the consequences of increased use, especially regarding visitor conflicts, air quality, wildlife and sound; and, recognition that desired future conditions are not well defined in the existing winter use plans.

Chapter 4 contains other general comments on the DEIS and comments on technical problems with the document. Section A includes comments from the Wyoming Game and Fish Department regarding wildlife issues in Grand Teton National Park. Section B includes comments from the Wyoming Department of Environmental Quality - Air Quality Division regarding incorrect statements made throughout the DEIS regarding air quality and ambient air quality standards exceedances. Section C includes comments from the University of Wyoming - Department of Agricultural and Applied Economics regarding socioeconomic factors in the DEIS. Section D includes additional detailed comments regarding socioeconomic impacts regarding actions proposed by the DEIS. Section E includes further comments regarding socioeconomic factors from the Wyoming Business Council. And, Section F includes additional miscellaneous comments.

CHAPTER 1

PROPOSED ACTIONS WITHIN ALTERNATIVES A-G SUPPORTED BY THE STATE OF WYOMING

Actions Common to All Three Park Units

Use an Adaptive Management Approach to continue scientific study and monitoring efforts in regards to impacts of winter visitor use and park resources; close selected areas and road segments if no other possible mitigation method is available (Alternatives B and E).

There is a large information gap and a clear lack of science presented in the DEIS related to park resources and winter visitor use to justify many of the management changes which are being proposed. An Adaptive Planning Approach that allows the results of new and ongoing research and monitoring to be incorporated into winter park management decisions after it has been subjected to independent third party review would solve many of the issues which this creates.

Independent third party review is essential to ensure acceptance by the general public. NPS has been accused (and in some cases, rightfully so) of doctoring data, misinterpreting data, or purposely designing studies to prove their desired outcome. Independent third party review by qualified peers, or groups like the National Academy of Sciences, would help remove this cloud of suspicion from studies which could potentially produce good science and lead to good management decisions for both park visitors and resources. Without independent review, these studies will always remain under a cloud of suspicion.

Using criteria stated within Executive Order 11644 (as amended) and its implementing regulation (36 CFR 2.18), monitoring results demonstrating disturbance to wildlife or damage to park resources would be cause to implement actions for mitigating these conditions (e.g. closure to snowmobile use). If these scientific studies and subsequent reviews substantiate that human presence or activities have a detrimental effect on park resources that could not otherwise be mitigated, the closure of selected areas of the park to visitor use, including sections of roads, could result. A public involvement process in accordance with NEPA and a 1-year notice should be required before any closure is implemented. The public comment period during this public involvement process should be at least 120 days in length because of the national interest such proposed closures would generate.

Establish an Advisory Committee to recommend new emissions and sound standards, including a phasing and implementation schedule (Alternatives B and E).

We support the establishment of an advisory committee which would advise NPS in regards to the prioritization of the ongoing research and monitoring efforts, as well as provide advice on proper study design for the research and monitoring efforts related to an Adaptive Management Approach. This advisory committee would also make recommendations to NPS regarding a phasing and implementation schedule for new mobile emissions standards when they are developed by EPA, as well as advise NPS in the development of new sound requirements for all over-snow vehicles for YNP, GTNP and the Parkway.

The advisory committee would be established by the Secretary of the Interior under the Federal Advisory Committee Act and should have equal representation from user groups, such as the snowmobile industry, and environmental groups. Additionally, it would include representation from Cooperating Agencies for the Plan/EIS, the NPS, plus other federal and state agencies from the immediate region with expertise pertinent to the winter use management issues.

Enforce current sound standards of 78dB(A) (Alternatives A and C).

We support the strict enforcement of the current sound level law of 78 dB(A). This sound level has been established by SAE as the "out-of-the-box" requirement for all snowmobiles which have been manufactured since 1978 and is also the sound level required by 36 CFR 2.18 and 7.21. Until a new sound level is established by SAE, the 78dB level is a valid threshold and should be strictly enforced.

There is a serious flaw in the Assumptions and Methodologies in regards to Natural Quiet [Vol. 1, page 171] and how the 78dB level for snowmobiles is compared to other vehicles. In this section, snowmobiles are compared to snowcoach sound levels at "60 to 70 dB at 50 feet" and to shuttle buses at "60 to 70 dB at 50 feet". Likewise in Table 15 [Vol. 1, page 128], an average car is listed as "60 to 70 dB at 40 mph @ 50 feet" and a diesel truck is listed as "80 dB at 40mph @ 50 feet". The 78dB sound level for snowmobiles is "at 50 feet at full throttle". First, the sound levels for snowcoaches, shuttle buses, cars and diesel trucks will be significantly higher than stated if they, too, are operated at full throttle. Second, snowmobiles are not allowed to operate at full throttle in the parks given the 45 or 35 mph speed limits, so their *real* operational sound level is significantly lower than 78dB. This discrepancy must be corrected before there can be any serious discussion as to whether or not a lower sound level law for snowmobiles should be established, and just how much lower would be appropriate as compared to other transportation methods.

Require new technologies which address snowmobile emissions and sound levels to be used as they become available (Alternatives B and F).

This management action simply takes advantage of "good science" and utilizes it as it becomes available. The DEIS suggests a 2-year grace period, once it is mass produced and available for public purchase. This is a reasonable proposal, but ultimately a topic which should be worked through an advisory committee.

Phase in alternative fuel/lube sales to the public (Alternatives C and D).

This management action is a no-brainer and should be included as one component in any management plan to begin addressing snowmobile emission concerns. It is proven science that ethanol blend gasoline and synthetic oils can reduce snowmobile emissions by 10 to 25% [Southwest Research Institute - White, 1998 and U. of Denver - Bishop and Stedman, 1999] The SRI study was conducted at laboratory temperatures of 60 degree F. Further testing has indicated that, at real operational temperatures for a snowmobile of +30 to -20 F, the reduction can be greater than 35%. This action should be adopted effective "day one" of the new winter use plan. It is available and in use today and there is absolutely no valid reason to postpone implementation for one to two years.

Prohibit late-night oversnow travel in all units (Alternatives A, D, F and G).

There are a range of late-night oversnow travel prohibitions proposed, ranging from as narrow as "11 PM to 5 AM" to as restrictive as from "sunset to sunrise". A late-night closure is supported because it will potentially improve public safety, improve trail maintenance and protect wildlife.

While the DEIS states that "89% of motor vehicle accidents involving snowmobiles occurred during daylight hours (8AM to 5 PM) [Vol. 1, page 100@ Time] , the remaining 11% were evidently snowmobile-bison accidents which occurred at night. However, this section is confusing in that it also talks about these accidents comprising 34% of all nighttime snowmobile accidents. Please restate this information more clearly. The bottom line, though, is that a night closure will remove the opportunity for these accidents and ultimately protect both people and bison.

The greatest benefit from a nighttime closure is that it will improve groomed trail conditions. Freshly groomed snow needs an opportunity to re-freeze before it is properly hardened and ready to support traffic. This requires several hours and can vary depending upon air temperature and moisture content of the snow. By beginning grooming operations immediately after the closure time, groomed roads will have the optimum time to re-freeze prior to the next days traffic. This should result in an improved visitor experience due to roads which stay smooth longer and also an increase in visitor safety since 16% of snowmobile accidents are due to "poor road conditions". [Vol. 1, page 100] At no time, should grooming be allowed to occur during daylight hours because the disturbed snow is quickly re-disturbed by traffic and quickly results in deteriorated roads, which in turn have a negative impact on visitor satisfaction and safety.

While a closure from sunset to sunrise would be best in an ideal world, it is unrealistic given in-park lodging at Old Faithful, as well as the great distance and time required to travel between entrances and features within the parks. Our recommendation is that a 10 PM to 6 AM closure be implemented for all park units. While it is slightly more restrictive than the 11 PM to 5 AM proposal, we believe it is the most realistic time frame and would still allow sufficient circulation time for those lodging at Old Faithful.

Implement a nighttime oversnow speed limit of 35 mph which would be in effect from sundown to sunrise, during the nighttime hours the parks are open to travel (Alternative E).

Given that it is dark from roughly 5 PM until 8 AM in the parks, we support reducing the speed limit during hours of darkness from 45 mph to 35 mph, during the hours the parks are open to travel. If a 10 PM to 6 AM closure is implemented, then the speed limit, in effect, would become 35 mph from around 5 PM until the parks close at 10 PM, and then again from when they open at 6 AM until when it gets light around 8 AM. This will afford greater protection to wildlife that may be moving about during these nighttime hours and also improve visitor safety by providing more reaction time to snowmobilers who could encounter wildlife or other obstacles on the dark roadways.

Implement information programs in cooperation with local communities (Alternatives B, C, D, F and G).

Local communities and organizations are an untapped resource which can assist NPS with heightening visitor awareness of the range of winter recreational opportunities available within the parks. These cooperative information programs could include gateway communities like Jackson, Cody, Dubois and West Yellowstone, as well as groups like state snowmobile associations, snowmobile and nordic ski clubs, and state and local agencies. These partners could help disseminate information relative to not only recreation opportunities, but also snow and trail conditions, safety and user etiquette education, interpretive opportunities and current management issues.

Actions for Yellowstone National Park

Road segments within Yellowstone, including Mammoth to Norris, Norris to Madison, Madison to West Yellowstone, Madison to Old Faithful, Old Faithful to West Thumb, West Thumb to South Entrance, West Thumb to Fishing Bridge, Fishing Bridge to East Entrance, Fishing Bridge to Canyon and Canyon to Norris are open to over-snow motorized vehicle travel, including snowmobiles and snowcoaches (*Alternatives* A and E).

We do not support plowing any additional roads for wintertime access within YNP, and in particular do not support plowing the road from West Yellowstone to Old Faithful as this would destroy the Grand Loop experience for all winter visitors and also eliminate access to important services which winter snowmobile and snowcoach visitors need, and which, to a great degree, are only available within the gateway community of West Yellowstone.

Winter access to YNP has been over-snow since 1955 by snowcoach and since 1963 by snowmobile. This over-snow experience is unique and a special part of why people visit the park in the winter. This special experience must be preserved so people can continue to experience Yellowstone's winter wonders in an up-front and personal way. While we recognize that access by snowmobile is controversial, we believe they can continue to be an appropriate mode of travel upon the winter snow-roads with proper reductions in emissions and sound levels. Likewise, snowcoaches are an appropriate winter transportation mode and part of the park's heritage. Buses and vans in the wintertime are not, and they do not belong there.

The winter season of operation for oversnow routes is mid-December to mid-March (Alternatives A, B, D, E and G).

A winter season of operation from mid-December to mid-March, if it is not artificially manipulated by NPS, is appropriate and acceptable to the general public. First, it must be consistent so visitors and concessionaires alike can plan ahead, since many winter visits to YNP are planned up to a year in advance. Second, this time period provides appropriate protection for concerns related to grizzly bear management.

The proposals in Alternatives B and C to lengthen the season by two week from the West Entrance, via plowed roads, will encroach on areas of concern for grizzly bear management. The proposal in Alternative C to lengthen oversnow access from the South Entrance to West Thumb by four weeks in March is of very limited value since there are no critical visitors services (food, gas, lodging) available at West Thumb. The proposal in Alternative F to move the closing date from mid-March to early March is without justification.

Strictly enforce a daytime oversnow speed limit of 45 mph (Alternatives A, B and D).

The existing 45 mph speed limit in YNP is appropriate for daytime conditions and should be strictly enforced. This speed limit provides an extra measure of protection in high-use areas. This provides management for public safety, wildlife protection, and also slows traffic down so they can more appropriately view the winter splendor of YNP.

An aggressive information program should be instituted in cooperation with area state snowmobile associations, safety education training programs, and state trail programs to encourage appropriate winter recreation behavior and etiquette.

Restrict non-motorized uses in wildlife winter range to travel on designated trails only (Alternatives B and E).

Since back-country use by cross-country skiers and snowshoers is less predictable than motorized use on roadways, numerous studies [Effects of Winter Recreation on Wildlife of the Greater Yellowstone Area: A Literature Review and Assessment - GYCC Winter Wildlife

Working Group, 10/99] have documented that higher energy expenditures result as wintering wildlife attempts to move away from such unexpected infringements upon their winter range. By designating non-motorized travel routes through these areas, wildlife has a chance to become conditioned as to travel routes which will potentially decrease their energy expenditure and increase their chance of winter survival and reproduction in these back country areas.

Actions for Grand Teton and the Parkway

Snowmobile and snowplane use is permitted on the frozen surface of Jackson Lake (Alternatives A and C).

Snowmobile and snowplane use on the frozen surface of Jackson Lake is critical to fishing access and no valid reasons have been presented in the DEIS as to why this access should be eliminated. We are adamantly opposed to any phase-out or blanket elimination of these vehicles, as this will *unjustly limit recreational* fishing use during the winter. As previously submitted in our May 24, 1999 comment letter [Vol. II, Appendix I], a winter creel survey was conducted on Jackson Lake during the 1995-96 winter season by the Wyoming Game and Fish Department. A total of 48.3% of the respondents used a snowplane to access the lake and 24.6% used a snowmobile. Only 27.1% walked onto the ice to go fishing.

Move the Continental Divide Snowmobile Trail (CDST) route to a new year-round pathway from Moran to Flagg Ranch (Alternative B).

A new year-round, off-road pathway would be a great improvement for year-round recreation within GTNP. It would not only provide an improved location for the CDST , but also provide a location for bicycle traffic to be moved off Highway 89/287 and improve summer visitor experience and safety. The existing utility corridor could be utilized to a great extent and existing overhead utilities could be buried along the new pathway to improve park aesthetics and also improve utility service by isolating them from weather caused outages. Consideration should be given to starting this new off-road pathway at the east boundary of GTNP instead of at Moran.

The CDST is important to Wyoming and recently gained national significance through designation as a *Millennium Legacy Trail*. *Millennium Trails* is a national initiative of the White House Millennium Council, sponsored by First Lady Hillary Rodham Clinton, in partnership with the U.S. Department of Transportation and the Rails-to-Trails Conservancy. This program is designed to recognize, promote and stimulate the creation of trails to "honor the past and imagine the future" as part of America's legacy for the year 2000. Trails have been and continue to be an important part of Wyoming's and America's landscapes as they tell the stories of our natural wonders and diverse people. Under this program, one trail was selected to be showcased in each state, and the CDST received this very distinguished status for Wyoming. We support this action as it would further enhance the CDST.

With a new, improved route for the CDST, commercial snowmobile outfitters should be permitted access to this new trail segment, which will help disperse use out of YNP and onto National Forest trails maintained by the state of Wyoming. Since use numbers are controlled by both NPS and the USFS through outfitter permits, use numbers can be closely monitored and controlled to avoid over-utilization by outfitters.

Accommodate the CDST on a widened highway shoulder from Moran to Flagg Ranch (Alternative C and portion of D).

This is our second choice if the new year-round route for the CDST cannot be accomplished. While there has been concern expressed for the safety of the existing CDST route along the highway road shoulder, there is no documentation of a safety problem presented in the DEIS. There have been no fatalities on this trail segment. From 1997 through 1999, there have been only six reported accidents involving snowmobiles in the entire GTNP, which includes areas in addition to the CDST. There were no injury accidents involving motor vehicles or snowmobiles in 1998 and 1999. [Vol. 1, pages 101 and 102] While not ideal, the CDST works on the road shoulder and could be greatly improved if the shoulder were to be widened. The DEIS inappropriately tries to minimize this safety record by stating that there have been several injuries and one fatality near Togwotee Pass on the CDST/US287. This is an inappropriate comparison and is in an area outside the scope of this DEIS, and therefore this comparison should be eliminated.

Allow snowmobile use on the Grassy Lake Road (Alternatives A, B, C, D, E, and F).

The Grassy Lake Road provides an important connection from JDR, GTNP, the CDST and State of Wyoming trails to trails by Fremont County, Idaho and the State of Idaho. This section also provides an opportunity to disperse snowmobile traffic out of, or around, YNP. Grooming needs to be increased and improved on this trail to accomplish dispersing this traffic. Additionally, commercial outfitters should be allowed access to this trail (they are currently prohibited by NPS) for their extended trips, which will take pressure off YNP routes.

CHAPTER 2

PROPOSED ACTIONS WITHIN ALTERNATIVES A-G OPPOSED BY THE STATE OF WYOMING

Actions Common to All Three Park Units

Establishment of any snowmobile emissions or sound level standards by the NPS, versus the EPA or SAE (Alternatives B, D and G).

The NPS proposes in Alternative B to implement strict emission requirements which would reduce snowmobile emissions by a minimum of 70% of hydrocarbons, 40% of CO and 75% of particulates by the winter of 2008-9. [Vol. 1, pages 27 and 202] According to the International Snowmobile Manufacturers' Association (ISMA), this equates to requiring a snowmobile with a four-stroke engine. The U.S. Environmental Protection Agency (EPA) is currently working to establish emission standards for all off-road engines, including snowmobiles. EPA is the federal expert on establishing emission standards, not NPS. NPS should defer snowmobile emission regulation to the EPA rather than jumping directly to four-stroke technology and not giving any consideration to emerging two-stroke engine technology. The use of four-stroke engines for snowmobiles is unproven technology and could result in public safety problems related to cold weather start and power-to-weight issues in deep snow conditions.

NPS demonstrated that they do not have the expertise to handle this complex subject when they recently released an air quality report, produced by their Air Resources Division, which was flawed and contained erroneous interpretations of data. This report, purportedly, was simply a collation of existing research which has been recently completed. If NPS air quality "experts" can't get something as simple as collating existing data right, how can they be expected to produce credible, and reasonable, new emission standards for snowmobiles?

To date, even though our Cooperating Agency agreement recognizes that the Wyoming Department of Environmental Quality has expertise in "air and water quality", we have not seen a copy of this report. This is in spite of the fact our Cooperating Agency agreement also states that NPS will "share and exchange models, data, and other information, in their possession now or when developed, relating to affected resources and environmental impacts and mitigation relating to the proposed action and its alternative in the EIS". NPS was so proud of this report that, on October 19, 1999, they issued a press release from YNP stating "Air Quality Study Results For Yellowstone National Park Available". Yet, they did not see fit to share a copy, as a courtesy, to the State of Wyoming or any of the other Cooperating Agencies. The Wyoming liaison requested a copy in person from Yellowstone's Chief of Planning, John Sacklin, on October 26, 1999 at the Cody EIS Public Hearing. We still did not receive a copy of this report.

We find this action, or lack there of, on the part of NPS to be reprehensible. Furthermore, after it came to light that there were errors in the report, we again requested of Mr. Sacklin (also on the 26th) that a retraction be made by NPS. The reply was that he wasn't sure they could do that. The erroneous press release was still posted on YNP's website on November 3, 1999, when we again requested (again in person, while at the EIS Hearing in Denver, CO) that YNP, at a minimum, remove this release from their website. It is our understanding that this finally was done sometime after November 4th. Again, the conduct of NPS and YNP on this matter has been purely reprehensible.

Sound levels for snowmobiles would be required to be at or below 70 decibels as measured on the A-weighted scale at 50 feet at full throttle (as compared to present sound law of 78 decibels or below). [Vol. 1, pages 28 and 214] This reduction of 8 decibels would mean snowmobiles would be required to be nearly one-half as loud as they are now (-10 decibels is one-half as loud). By comparison, the sound level for a diesel truck (bus) is 80 decibels at 40 mph at 50', a motorcycle at 25' is 90 decibels, and an average car going 40 mph at 50' is 60 to 70 decibels (a little Honda is closer to the 60 decibels while a pickup truck is 70 or even 75 decibels). [Vol. 1, page 128] The sound law based on full throttle for a snowmobile is not an equal comparison to other vehicles at 40 mph. First, a snowmobile is operated in the parks at a maximum speed of 45 mph, certainly not at full throttle. Second, the sound level for the other vehicles would be much higher if they were also operated at "full throttle" for the comparative sound measurement. Snowmobiles and other vehicles should have equal treatment for sound standards.

Restrict winter access to only oversnow mass transit motor vehicles (Alternative G).

We do not support "mass transit only" alternatives which are being proposed by both NPS and various environmental groups. We believe the freedom of personal access is an important part of achieving the personal re-creation which is so often sought by visitors to our state and national parks. Personal access, whether by snowmobile in the winter or personal auto in the summer, allows visitors to stop along the road at-will, to view wildlife, take photos, experience the crispness of the winter air, at their own pace as individuals. Opportunities for personal re-creation are the heart and soul of the reasons why people seek recreational activities.

What is noteworthy about the position of the groups who are seeking "mass transit only" [The Citizen's Solution - Greater Yellowstone Coalition, Bluewater Network, et al] management is that their real goal, as well, is personal recreation. After they ride mass transit into the park's interior, their goal is to go off and ski by themselves, away from groups, to experience personal re-creation. They are promoting the removal of snowmobiles from the parks solely to improve the quality of their personal access. To totally eliminate personal access for one user group to the benefit another could be viewed as discriminatory.

Wintertime access to the Yellowstone interior has been oversnow since 1955 by snowcoach (mass transit) and since 1963 by snowmobile. ["Snowplanes, Snowcoaches and Snowmobiles:

The Decision to Allow Snowmobiles Into Yellowstone National Park", M. Yochim, *Annals of Wyoming*, 1998] Even though oversnow, mass transit has been an available choice in Yellowstone for 45 years, the oversnow transportation of choice is an individual snowmobile by a factor of about 9 to 1. [Table 21, Vol. I, page 143] In a market driven economy like we have, this is a very telling statement. Park visitors choose to experience their national parks in an up-front and personal way, whether by snowmobile in the winter or personal auto in the summer.

Yellowstone is a western park which demonstrates western values which are sought out by its many urban visitors. Requiring everyone to enter this section of the park only via a regulated, sterile bus or van is analogous to telling a cowboy he must corral his horse and travel from here on out in the back of a covered wagon. His view of the white canvas in the back of the wagon would be the same as those who would be suffered to a "white-window" experience in the back of a bus. This *personal access* perspective must not be taken lightly or swiftly dismissed because it is the root of winter visitor satisfaction in Yellowstone.

Actions for Yellowstone National Park

Plowing the road from West Yellowstone to Old Faithful to provide wheeled-vehicle access and "affordable access" into the interior of the park (Alternatives B and C).

These Alternatives propose to plow the road from West Yellowstone to Old Faithful which will:

1) eliminate all snowmobile access to and from West Yellowstone (this was 70.8% of Yellowstone National Park's (YNP) snowmobile visitors in 1998-99) [Vol. 1, page 198]
2) eliminate the Grand Loop experience for all winter visitors [Vol. 1, page 220]
3) eliminate or detract from several critical characteristics of the desired winter experience for a large number of participants (48% of winter users in 1998-99) [Vol. 1, page 220]
4) eliminate reasonable access to services within and outside of Yellowstone since snowmobile passengers account for 90% of the visitation through the west gate [Vol. 1, page 217]

According to NPS's own survey, only 4% of visitors supported plowing the road from West Yellowstone to Old Faithful without a parallel snowmobile route being provided to provide continued over-snow access. [Vol. 1, page 200]

According to NPS's own survey, the median willingness of visitors to pay for a plowed road to Old Faithful was $5 per person, while the same visitor was willing to pay an additional $45 per day to rent a cleaner, quieter snowmobile. [Vol. 1, page 201] This $5 would not go very far since the NPS lists their cost for road plowing as "$22 per lane mile per day". (30 miles x 2 lanes x $22 = $1,320/day x 170 days (NPS's stated "plowing season") = $224,400) [Vol. 2, Appendix F]

The NPS estimates that plowing the road from West Yellowstone to Old Faithful will result in a $12.4 million decrease in visitor spending and the loss of 301 jobs in the Greater Yellowstone Area (GYA). [Vol. 1, page 198] The State of Wyoming estimates that this loss will actually be about $97 million in visitor spending and more than 1,000 jobs in the GYA. [Vol. 2, Appendix I, page 7 of our May 24, 1999 submission letter] From our perspective, the analysis assumptions submitted at that time continue to be valid and should not continued to be ignored and dismissed by the Park Service.

Alternative B proposes to provide shuttle bus service between West Yellowstone and Old Faithful at a "cost of $10 to $20" per person to "provide affordable access to the park's interior". [Vol. 1, page 199] This will require a taxpayer subsidy of $25 to $40 per person since it costs an average of $38 per person, plus a $10 person park entrance fee, to enter the park on a tour bus during the summer season. The same tour buses would be used in the winter under this scenario.

One of the park's stated reasons for plowing the road from West Yellowstone to Old Faithful is to "provide affordable access for minority and low-income people" since this segment of the population would now typically have to pay $85 to $100 a day to rent a snowcoach or snowmobile to visit Old Faithful. Yet, in the Draft EIS, the NPS admits the current income distribution of summer and winter visitors to Yellowstone is quite similar, even though the summer visitors do not have to pay the "high" costs of snowmobile or snowcoach rental. "The 1999 Winter Visitor Survey in the GYA found that 11.9% of winter visitors reported having a 1998 total household income below $15,000. These results are comparable to results found in a 1998 summer visitor survey in YNP where 11.1% of respondents reported a household income below $15,000. The 1999 winter visitor survey reported that 99.0% of all winter recreation visitors in the GYA are white and 66% are male, which compares to summer visitors where 98% are white and 50% are male." [Vol. 1, page 91] The bottom line is that it costs all visitors a lot just to get to the Yellowstone area, regardless of whether they are low, middle or high income, and the cost of a snowmobile, snowcoach, or even a bus rental for that matter, is irrelevant as to whether or not they can afford to visit Yellowstone. [Vol. 1, page 199] This affordable access argument for minority and low income populations, as it relates to justification for plowing this road segment, is extremely flawed.

Additionally, although there is already "affordable access" via the plowed roadway through the north entrance to the Mammoth and Tower-Roosevelt areas of Yellowstone, use is relatively light and accounts for only 32% of Yellowstone winter visitation. [Vol. 1, page 145] If plowed roads are really such a critical factor in providing affordable access, then the north entrance should already be the leading access point to YNP versus being a distant second to the west entrance. [Vol. 1, page 144]

Alternatives B and C would plow an additional 30 miles of road which would cause increased habitat fragmentation for wildlife by creating barriers to movement of ungulates (elk, bison). This includes structural barriers formed by snow berms created during the plowing operation. The magnitude of these types of barriers as an adverse impact to ungulate movement often exceeds that which is similarly created by groomed roads. [Vol. 1, pages 182, 209] Plowed roads will trap wildlife between the snow berms and vehicles and increase the chance of collision between wheeled vehicles and ungulates as they use the plowed roads to conserve energy while moving in and about their winter range. Collisions between wildlife and wheeled vehicles in YNP are already greater by a factor of 3 to 1 over snowmobiles. [Vol. 1, page 99] Plowing this additional 30 miles of road will likely increase this ratio.

"Plowing the road from West Yellowstone to Old Faithful would create berms of snow that would detract from scenery viewing opportunities in some areas." [Vol. 1, page 221] In addition to this "snow tunnel" scenery, "visitor experience" would occur solely under the close supervision of a bus driver and from the viewpoint of frost-covered bus windows. There would be no personal freedom to stop and view attractions or wildlife along this road by individuals.

From our perspective, the freedom of *personal access* is an important part of achieving the *personal re-creation* which is so often sought by visitors to our state and national parks. Yellowstone is a western park which demonstrates western values which are sought out by its many urban visitors. Requiring everyone to enter this section of the park only via a regulated, sterile bus or van is analogous to telling a cowboy he must corral his horse and travel from here on out in the back of a covered wagon. His view of the white canvas in the back of the wagon would be the same as those who would be suffered to a "white-window" experience in the back of a bus. This *personal access* perspective must not be taken lightly or swiftly dismissed because it is the root of winter visitor satisfaction in Yellowstone. Furthermore, most who are promoting the removal of snowmobiles from the parks are at the same time desiring to improve the quality of their personal access for activities such as cross-country skiing or snowshoeing. Again, to totally eliminate personal access for one user group to the benefit another could be viewed as discriminatory.

Under Alternative B, visitor access from the west entrance would be primarily by mass transit with very limited opportunity for private vehicle access (by reservation only). 10 to 20 trailer spaces would be available at Old Faithful for snowmobile trailer parking, with up to 40 spaces being available for passenger vehicles. All other access would be via 20-30 buses and a fleet of 45 15-passenger vans departing at 5 minute intervals. Under this scenario, NPS proposes to increase average daily visitation to Old Faithful by almost 130%. [Vol. 1, page 218] This is very peculiar since "overcrowding" and the overtaxing of services at Old Faithful has been an issue persistently touted by the NPS. [Winter Visitor Use Management: A Multi-Agency Assessment, Greater Yellowstone Coordinating Committee - March 1999, page 14] So what's the straight scoop? Has the issue of overcrowding really been solved or not?

"Park visitors riding the shuttle bus on busy weekend days would find little opportunity for solitude on the road from West Yellowstone to Old Faithful. Sounds of buses and shuttle bus vans will be audible along this stretch of roadway." [Vol. 1, page 221] So, even with the "noise" of snowmobiles removed from this area, visitors still will not have solitude?

In Volume II, Appendix F "Construction and Operation Costs", NPS states that their cost of grooming a snow road is "$27 per lane mile/day" while their cost for plowing a road is "$22 per lane mile/day". We take issue with the grooming cost and believe it is intentionally inflated to try to justify the park's preferred alternative of road plowing by showing that it is less expensive to plow than groom. The State of Wyoming is in the business of snowmobile trail grooming and knows what the costs are. We maintain over 2,000 miles of snowmobile trail (versus the 180 miles in YNP) with 14 private contractors and five pieces of state-owned equipment. Our 14 contractors are private businessmen, which means they are in the business "for-profit", not just to cover operational costs as a government agency is. Our contractors are selected by a competitive bid process and they supply all their own equipment, labor and operating needs. Our contract prices range from $9.00 per lane mile to $11.50 per lane mile, with the statewide average being $10.05 per lane mile. Again, these contractors are in the business "for-profit", so $27 per lane mile to groom roads within YNP is outlandish. Our position is that the real cost to groom a road is about half the cost to plow it. Plus, you have more consistent public access since an oversnow road is seldom snowed shut because of severe weather or winds.

Plowing the road from Mammoth to Norris to Madison in mid-February to provide late season wheeled-vehicle access into the interior of the park (Alternative C).

We fail to see how this mid-season road plowing will provide a greater range of winter recreation opportunities and the DEIS fails to outline what expanded opportunities will be created. If implemented, it will result in the loss of one to two weeks of recreation access in the northern half of YNP during the time the road is being converted to plowed status. Additionally, after the road is converted to plowed status, there will be a number of days when access is lost due to severe weather conditions (heavy snowfall, high winds, drifting) forcing a road closure, as compared to this access more likely being continuous if the segment remains an oversnow route.

The plowing of the road at mid-season will result in the loss of one month of motorized oversnow experience in the northern half of YNP and result in the lost ability to travel, by an oversnow recreational transportation mode, to Old Faithful from anywhere but the south and east entrances.

The plowing of the road at mid-season will result in the lost ability to visit the north end of YNP over President's Day weekend, unless the proposed transition time of "mid-February" is defined to always fall after this holiday period. If the transition time occurs around or just prior to this weekend, the effect will be that no access will be available to these areas because the snow removal operation would not yet be complete. Additionally, this transition will be hindered by the fact it will be occurring as the park hits peak snowfall season.

It appears that the main reason for this proposal is that, rather than expanding recreation opportunities, it will speed up wheeled vehicle access between headquarters at Mammoth and Old Faithful for both NPS staff and the park concessionaire.

Converting the oversnow route from Norris to Canyon to Fishing Bridge to "mass transit/snowcoach only" from mid-February to mid-March (Alternative C).

The DEIS fails to show how greater opportunities for recreation will be provided. There are no snowcoach staging facilities at Norris, and most importantly, no capability to re-fuel snowcoaches at Norris. The stated reason for closing this segment to snowmobile use is to "provide opportunities to ski or snowshoe in a quiet environment", [Vol. I, page 31] yet there is no proposal in the Alternative to add ski areas beyond what already exists at Canyon or Virginia Cascades. There is also no logical destination for a snowcoach traveling the 13 miles from Norris to Canyon other than to go there and return. There are no lodging or dining opportunities at Canyon, so there is extremely small incentive to take a coach there from Norris. Likewise, since there is virtually no coach traffic from the east entrance, and since it is 58 miles one-way from the south entrance to Canyon, it is doubtful converting this road segment to mass transit only will really be of much benefit to late season recreation opportunities.

Eliminating access from the east entrance by closing the Fishing Bridge to East Entrance road segment to oversnow use (Alternative D).

Eliminating access from the east entrance to Fishing Bridge will adversely affect recreational access to the eastern portion of YNP. The "safety and cost concerns" regarding east entrance access are not sufficiently quantified in the "Impacts of Implementing Alternative D" as it simply states, "Closing the YNP East Entrance would eliminate all risks from avalanches and future avalanche control to employees and the 3% of snowmachine riders." [Vol. I, page 246]

This closure is proposed in only one of the alternatives, "D". It would seem that if this were really a critical issue, with substance, it would have also been addressed in more of the seven alternatives. "Cost" seems to be a superficial concern given that "better avalanche mitigation" is listed at an annual cost of a mere $25,000 out of a $6.48 million existing winter budget, with some alternatives proposing to raise the overall winter budget to as high as $11.6 million per season. [Vol. II, Appendix F]

"Safety" as it is related to use of the east entrance to Fishing Bridge road segment is not addressed in the DEIS. There is no mention of snowmobile or snowcoach avalanche-related incidents, accidents or fatalities on this segment, or for that matter in all of YNP. The only avalanche fatalities listed for the park are "2" under "Skis" in Table 11. [Vol. 1, pages 97-101]

The DEIS attempts to minimize the importance of public access to YNP from the east entrance and states, "only minor adverse impacts would occur to overall park access because the 4,100 winter season visitors using the east entrance represent only 3% of winter season visitation." [Vol. I, page 256] If you're a resident of northwest Wyoming or a lodge owner outside the east entrance, this elimination of access is not minor, it is very major, because they are essentially shut-out of reasonable YNP access since their only access becomes either the south entrance (352 miles around during the winter), the north entrance (348 miles around during the winter) or the west entrance (410 miles around during the winter). Additionally, YNP staff stationed at the east gate would also have to travel 348 miles to reach park headquarters in Mammoth.

The economic impact of this closure would be devastating to the Cody area and northwest Wyoming. The loss of these 4,100 visitors equates to $5.4 million per year in visitor spending (4,100 visitors x $1,324/visitor {$774 direct and $550 indirect} - Taylor, University of Wyoming 1995). This is a severe impact to an area of Wyoming which depends upon the tourism industry, year-round, to exist. Furthermore, because of the large amount of wilderness on the National Forest surrounding Yellowstone, which is closed to motorized use, there is no opportunity to relocate this displaced use. Therefore, this economic loss is permanent.

While the east entrance has had the least winter visitor entries, the low number is somewhat misleading since NPS has manipulated access by frequent closures, purportedly due to avalanche danger. Local residents have frequently challenged NPS response to grooming and avalanche control on this road segment, believing NPS purposely drags their feet in this area to keep the east entrance closed longer than necessary. This has resulted in the gate being closed many days each season, which deters regular use through this entrance since visitors fear entering from this point because they may not be able to get back to their vehicles due to the frequent closures.

Environmental groups have come out in favor of closing this road segment because of the use of "military ordinance" which is used for avalanche control. The benefit of the use of this material to benefit public safety during the winter season far outweighs the potential for it to create a danger to public safety in the summer. NPS manages areas of the park as "closed" all the time, whether for grizzly bears or other resource concerns, so posting these areas as "closed to use" should not be an unreasonable mitigation method to ensure the public is not harmed from an unexploded ordinance.

Close roads from West Yellowstone to Madison, Madison to Old Faithful, Madison to Norris, and Norris to Mammoth to all vehicular travel from November 1 to April 30 (Alternative F).

We are adamantly opposed to this proposed action. It will eliminate access to over 36% of the existing roadway in YNP to all people, including both motorized and non-motorized users, and will eliminate all access from the west and north entrances. The economic impact of this action will be in excess of $87 million in visitor spending (ave. 66,000 visitors x $1,324/visitor {$774 direct and $550 indirect} - Taylor, University of Wyoming 1995) and will be devastating to the local economies of Gardiner and West Yellowstone, MT.

The stated reasons for this proposed closure are to "emphasize the protection of wildlife resources" and to "address concerns about the use of groomed roads by wildlife". [Vol. I, pages 35-36] This action would fly in the face of the park's mandate to be "set apart as a public park or pleasuring ground for the benefit and enjoyment of the people". [Vol II, Appendix C, An Act to Set Apart. . .as a Public Park] Yellowstone is a national park, it is not a national wildlife refuge. While natural resources, including wildlife, must be balanced in park management, the bottom line is that people have a right to expect access to their public park rather than being locked out of over one-third of it for 6 months of the year.

Actions for Grand Teton and the Parkway

Eliminating plowing of the road from Colter Bay to Flagg Ranch (Alternative D).

Given the recent infrastructure improvements at Flagg Ranch, coupled with the fact infrastructure would either have to be added or improved at Colter Bay to make this work, this would not be a positive change and we therefore do not support it.

By moving the staging area from Flagg Ranch to Colter Bay, winter operations at Flagg Ranch would be severely hindered. They need regular delivery of fuel, propane, food and other goods and services to exist through their winter season. If this action were implemented, this concession would most likely have to close during the winter, which would also affect their ability to offer services during the winter due to lost cash flow from their winter season.

This action would also dramatically alter logistics for oversnow trips into YNP from the south. The additional 18 miles oversnow would change a commercial trip from Flagg to Old Faithful from around 80 miles round-trip to about a 116 miles round-trip. First, this will require that all snowmobiles be re-fueled at Old Faithful because they can't make the round-trip on one tank of gas, whereas they can for an 80 mile trip. This scenario will also be true for all private sleds entering from the south. The effect of this action is that fuel supply at Old Faithful will be severely impacted by this action and will need to be increased to meet demand which has been artificially created by NPS action. Second, this action will add at least an hour (one-way) to oversnow travel time from the south entrance to destinations like Old Faithful or Canyon. The need to refuel will extend this trip time even further. This trip is already quite long for novice riders on rental sleds or visitors on commercial tours. Operator fatigue will be increased which could result in a decrease in overall visitor safety.

This action will also eliminate existing wheeled vehicle access for skiers to the Flagg Ranch area and to national forest areas directly east of GTNP and JDR. Additionally, wheeled vehicle access for ice fishermen to Jackson Lake would be eliminated.

Eliminating a route for the CDST and replacing it with shuttle service from the east boundary to Flagg Ranch (Alternatives E and F) or with mass transit only access (Alternative G).

A route for the CDST is critical to providing a connecting link to snowmobile trails outside the parks in the states of Wyoming and Idaho so there is an opportunity for snowmobile use to be dispersed from YNP onto other trail systems in the GYA. A shuttle service is unworkable and unacceptable to the State of Wyoming.

The CDST is important to Wyoming and recently gained national significance through designation as a *Millennium Legacy Trail. Millennium Trails* is a national initiative of the White House Millennium Council, sponsored by First Lady Hillary Rodham Clinton, in partnership with the U.S. Department of Transportation and the Rails-to-Trails Conservancy. This program is designed to recognize, promote and stimulate the creation of trails to "honor the past and imagine the future" as part of America's legacy for the year 2000. Trails have been and continue to be an important part of Wyoming's and America's landscapes as they tell the stories of our natural wonders and diverse people. Under this program, one trail was selected to be showcased in each state, and the CDST received this very distinguished status for Wyoming. This showcase trail should not be dismantled by the NPS. Congressional action was needed to establish this trail segment initially and, if necessary, Congressional action will be pursued to preserve a route through GTNP and JDR.

Eliminating snowmobile use (Alternatives B, D and G) or all motorized use on Jackson Lake (Alternatives E and F).

Ice fishing opportunities via snowmobile and snow plane would be lost on Jackson Lake. Snowmobile and snowplane use on the frozen surface of Jackson Lake is critical to fishing access and no valid reasons have been presented in the DEIS as to why this access should be eliminated. We are adamantly opposed to any phase-out or blanket elimination of these vehicles as this will unjustly limit recreational fishing use during the winter. As previously submitted in our May 24, 1999 comment letter [Vol. II, Appendix I], a winter creel survey was conducted on Jackson Lake during the 1995-96 winter season by the Wyoming Game and Fish Department. A total of 48.3% of the respondents used a snowplane to access the lake and 24.6% used a snowmobile. Only 27.1% walked onto the ice to go fishing.

CHAPTER 3

REVISED ALTERNATIVE "E"

A COMPILATION OF MANAGEMENT ACTIONS AS SUPPORTED BY THE STATE OF WYOMING

YELLOWSTONE & GRAND TETON NATIONAL PARKS and the JDR PARKWAY WINTER USE PLAN - DRAFT EIS

Revised Alternative "E"

As supported by the State of Wyoming

Note: Words in *italics* designate revised language from the original NPS Alternative "E".

General Management Theme

Revised Alternative "E" emphasizes the protection of wildlife and other natural resources while allowing park visitors access to a *full* range of winter recreation experiences. It uses an **adaptive planning approach** that allows the results of new and ongoing research and monitoring to be incorporated *into winter park management decisions after it has been subjected to independent third party review*. Using criteria stated within Executive Order 11644 (as amended) and its implementing regulation (36 CFR 2.18), monitoring results demonstrating disturbance to wildlife or damage to park resources would be cause to implement actions for mitigating these conditions (e.g. closure to snowmobile use). *Revised* Alternative E calls for the institution of an **advisory committee**, *chartered pursuant to the Federal Advisory Committee Act, to assist NPS with the implementation of Adaptive Management. The advisory committee would advise NPS in regards to the definition of standards to define desired conditions for various park resources that may be affected by winter use; definition of benchmarks to determine differences between the present and desired conditions; determination of monitoring and research priorities to evaluate differences; study design, including independent review of research results, to accomplish monitoring and research priorities; development of appropriate contingency strategies; and, development of an orderly process, including additional review pursuant to NEPA, to implement revisions of the winter use plan. The committee would also* make recommendations *to NPS regarding a phasing and implementation schedule for new EPA* standards for addressing *mobile* emission and sound issues, *once they are developed.* Local, county, state and federal agencies, as well as representatives from *user groups and conservation* groups, would participate on this committee.

Actions Common to All Three Park Units

- This alternative would be a commitment to the development of acceptable measures for mitigating impacts, consistent with criteria in 36 CFR 2.18.

  Justification: Self-explanatory

- Encourage partnerships and public participation to address *visitor and natural resource management issues and mobile* emission and sound concerns by establishing an advisory committee (established by the Secretary of the Interior under the Federal Advisory Committee Act.) The committee would include representatives from Cooperating Agencies for the Plan/EIS, environmental groups, the snowmobile industry, the NPS, plus other federal and state *agencies with expertise pertinent to the winter use management issues. The committee would advise NPS regarding prioritization of ongoing research and monitoring efforts, as well as assist with advice on proper research and study design of research and monitoring efforts under the adaptive planning approach to address the full scope of issues that are relevant to the purpose and need for this EIS, i.e. air and water quality, sound, visitor use capacity, conflicts among visitor use, wildlife, etc.* The committee would *also advise NPS in regards to a phasing and implementation schedule for new mobile emission standards when they are developed by EPA, as well as advise NPS in the development of new* sound requirements for all over-snow vehicles for YNP, GTNP and the Parkway.

  Justification: As previously stated in Chapters 1 and 2, an Advisory Committee can be a valuable tool to assist NPS with addressing the numerous issues facing winter use management. By giving user groups, like the snowmobile industry, and environmental groups, who are frequent critics of park management, a seat at the table, communication can be enhanced and issues can usually be solved more efficiently and effectively.

  Since there are a plethora of issues to be dealt with regarding winter use management, with respective to both visitors and natural resources, the advisory committee could be used to help prioritize which issues should be tackled first. This process will also help gain buy-in from the many affected parties.

- *Require the sale of only Bio-Base Fuels (10% ethanol blend fuel and synthetic low-emission oil) within the Parks beginning with the 2001-02 winter season. All commercial snowmobile operators in West Yellowstone, Jackson and at the other entrances would also be required to use Bio-Base Fuels for all snowmobiles they send into the Parks.*

  Justification: As discussed in Chapter 1, it is proven science that ethanol blend gasoline and synthetic oils can reduce snowmobile emissions by up to 35%. Since this technology is available, and to a great extent already in use by commercial outfitters and NPS, it is an easy first-step toward addressing emission issues. There is no reason to delay implementation and should be adopted, effective immediately. Since about 70% of all visitors use rented snowmobiles [Vol. I, page 99], this action will be a significant step. By offering it for sale within YNP (with no other options) it will force private snowmobile users (the remaining 30%) to make choices: either shorten their trip in so they don't have to refuel in the park, or else they will be forced to convert to using bio-based fuel before they enter YNP (since it requires re-jetting carburetors) if they plan a trip of over about 80 miles, on which they will need to purchase fuel in the park.

- *Establish an interim visitor carrying capacity, based upon use patterns related to the past 7-year average, to address overcrowding concerns and trail maintenance issues. Use adaptive planning to address long-term carrying capacities for visitors and wildlife.*

Justification: The DEIS states under *Actions and Assumptions Common to all Alternatives* that NPS will "determine visitor use capacities based on studies that set indicators and standards for desired visitor experiences and resource conditions". [Vol. I, page 25] It seems backwards to us that this will occur after a management option has been selected rather than before. From a logical perspective, we believe carrying capacities should be set at the front-end, and then management plans should be built around those capacities to ensure goals are met. We are proposing that the 7-year average [Table 21, Vol. I, page 143] be used to adopt an interim carrying capacity for visitor use (or at least for snowmobile visitors) and then that adaptive management, along with an advisory committee, be used to establish long-tem capacities for both visitors and wildlife. This starting point of the 7-year average would allow less visitor use than the peak years, but slightly more than the past few years.

- *Establish a night-time closure to entry into YNP, GTNP, and the Parkway from 10 PM to 6 AM to promote public safety, improve trail maintenance and protect wildlife.*

Justification: Self-explanatory as per our comments in Chapter 1

- *Implement aggressive information programs in cooperation with state snowmobile associations and other winter recreation safety programs to encourage appropriate winter recreation behavior and etiquette.*

Justification: Self-explanatory as per our comments in Chapter 1

- *Support strict enforcement of the posted speed limit, with a maximum speed limit of 45 mph.*

  Justification: Self-explanatory as per our comments in Chapter 1

- *Implement a nighttime oversnow speed limit of 35 mph which would be in effect from sundown to sunrise, during the nighttime hours the parks are open to travel.*

  Justification: Self-explanatory as per our comments in Chapter 1

- *Disperse use throughout the Parks by better utilizing existing visitor facilities for overnight lodging, food services and warming huts to reduce impacts on natural resources and to assure a quality visitor experience. Provide additional portable warming huts at areas where facilities do not presently exist.*

  Justification: One of the major disappointments with the DEIS is that this action was essentially discarded under *Alternatives Considered but Eliminated from Detailed Study*. The reason given was that " most areas of the parks outside road corridors are in recommended or potential wilderness. They are, therefore, unavailable for allocation to the suggested uses." [Vol. I, page 38] This reason does not apply appropriately to what is being proposed. This action is asking NPS to open existing visitor facilities within the interior of YNP at locations such as Canyon, Lake and/or Grant Village (none which are located in wilderness) so visitors within the park have incentive to use destination areas other than just Old Faithful. Without lodging and hot food, there is disincentive to use the other areas which have been mentioned.

  Warming hut improvements are needed at Norris, Madison and Fishing Bridge. If food service was opened at Canyon, the existing warming hut could be eliminated. If not, it needs to be improved and expanded. Additionally, descent warming/lunch facilities need to be provided for outfitters and their clients at Old Faithful.

- *Support an educational video for use in gateway communities and at all area rental shops to inform rental snowmobile operators regarding snowmobile safety, operational laws and etiquette, and park resource management.*

  Justification: Since "about 70% of all visitors use rented snowmobiles, and 85% of the snowmobiles involved in accidents from 1995-1999 were rental snowmobiles" [Vol. I, page 99], this action could provide a significant improvement in overall visitor safety.

However, since "about 11% of people involved in wintertime motor vehicle accidents in YNP are employees of the park or its concessionaire" [Vol. I, page 99], this requirement should probably also be extended to NPS, which collectively, would capture 96% of all park accidents

Actions for Yellowstone National Park

- Continue scientific studies and monitoring related to park resources and winter visitor use, *but subject all studies and monitoring efforts to independent third party review*. If these scientific studies and subsequent reviews substantiate that human presence or activities have a detrimental effect on park resources that could not otherwise be mitigated, the closure of selected areas of the park to visitor use, including sections of roads, could result. *A public involvement process in accordance with NEPA, with a minimum public comment period of at least 120 days, and* a 1-year notice would be required before any closure is implemented.

Justification: As previously stated in Chapter 1, there is a large information gap and a clear lack of science presented in the DEIS related to park resources and winter visitor use to justify many of the management changes which are being proposed. An Adaptive Planning Approach that allows the results of new and ongoing research and monitoring to be incorporated into winter park management decisions after it has been subjected to independent third party review would solve many of the issues which this creates.

Independent third party review is essential to ensure acceptance by the general public. NPS has been accused (and in some cases, rightfully so) of doctoring data, misinterpreting data, or purposely designing studies to prove their desired outcome. Independent third party review by qualified peers, or groups like the National Academy of Sciences, would help remove this cloud of suspicion from studies which could potentially produce good science and lead to good management decisions for both park visitors and resources. Without independent review, these studies will always remain under a cloud of suspicion.

Using criteria stated within Executive Order 11644 (as amended) and its implementing regulation (36 CFR 2.18), monitoring results demonstrating disturbance to wildlife or damage to park resources would be cause to implement actions for mitigating these conditions (e.g. closure to snowmobile use). If these scientific studies and subsequent reviews substantiate that human presence or activities have a detrimental effect on park resources that could not otherwise be mitigated, the closure of selected areas of the park to visitor use, including sections of roads, could result. A public involvement process in accordance with NEPA and a 1-year notice should be required before any closure is implemented. The public comment period during this public involvement process should be at least 120 days in length because of the national interest such proposed closures would generate.

- *Prohibit plowed road access anywhere in YNP during the winter season, with the exception of continued automobile access to northern attractions in the Gardiner, Mammoth, Tower-Roosevelt and Cooke City areas.*

Justification: As stated in Chapters 1 and 2, we believe oversnow travel continues to be the most appropriate form of winter transportation into the park's interior. Please refer to these extensive comments.

- *Provide expanded non-motorized opportunities/trails away from main motorized routes by providing regular skier shuttles from Old Faithful and West Yellowstone to non-motorized areas away from these sites.*

Justification: Emphasis needs to be given to some separation of motorized and nonmotorized use, particularly within the YNP interior. Since all users are highly dependent upon the existing road network for access, some of this will be impossible to achieve. For instance, at locations like Old Faithful, all users are forced together due to available services and infrastructure. A regular shuttle service for skiers needs to be provided to disperse them away from Old Faithful where solitude is an unrealistic expectation.

- Restrict non-motorized uses in wildlife winter range to travel on designated trails only.

Justification: As stated in Chapter 1, since back-country use by cross-country skiers and snowshoers is less predictable than motorized use on roadways, numerous studies have documented that higher energy expenditures result as wintering wildlife attempts to move away from such unexpected infringements upon their winter range. By designating non-motorized travel routes through these areas, wildlife has a chance to become conditioned as to travel routes which will potentially decrease their energy expenditure and increase their chance of winter survival and reproduction in these back country areas.

- *Address congestion and visual concerns regarding snowmobile parking at Old Faithful by relocating snowmobile parking away from the Visitor Center area to the Old Faithful*

Lodge area. Reserve parking in the immediate Visitor Center area for only snowcoaches and ADA access for snowmobilers.

Justification: A lot of the perceived "overcrowding" at Old Faithful appears to be due to pictures of "large numbers" of snowmobiles parked near the Visitor Center, with Old Faithful in the background. A part of this perception could be managed by relocating snowmobile parking away from the Visitor Center to an area by Old Faithful Lodge. This new area is still within easy walking distance of Old Faithful, warming huts and the Visitor Center. The existing area could then be used solely for snowcoaches and ADA snowmobiler access, providing a minor, but yet potentially significant, separation of use.

- *Require all west gate entrance passes to be pre-purchased at local outlets or at the Public Lands Information Center in West Yellowstone. Promote the sale of these pre-paid passes at all other entrances.*

Justification: Since the west entrance is the focal point of most snowmobile emission issues, this action could further build upon efforts already in place by which snowmobilers are encouraged to pre-purchase their park entrance permits. By requiring all west gate entrance passes to be pre-purchased in town, time spent idling in line can be further reduced. It is also possible that all guide and rental sleds could be equipped with some type of smart-card to further expedite access and decrease time at the gate. While numbers are fewer at the other entrances, pre-paid passes could also be beneficial in these areas.

- Keep the length of the winter use season as the period from mid-December to mid-March.

Justification: As stated in Chapter 1, a winter season of operation from mid-December to mid-March, if it is not artificially manipulated by NPS, is appropriate and acceptable to the general public. First, it must be consistent so visitors and concessionaires alike can plan ahead, since many winter visits to YNP are planned up to a year in advance. Second, this time period provides appropriate protection for concerns related to grizzly bear management.

Actions for Grand Teton and the Parkway

- *Provide a route for the Continental Divide Snowmobile Trail (CDST) on a newly established year-round, off-road path from the east entrance of GTNP to Moran to Flagg Ranch, taking advantage of suitable resource conditions, topography and grade to* *accommodate both winter grooming and summer bicycle use. The existing utility corridor would be utilized to a great extent and existing overhead utilities would be buried along the path to improve Park aesthetics and improve utility service by isolating them from weather caused outages. Commercial snowmobile outfitters should be allowed permitted access to this new trail segment.*

Justification: As stated in Chapter 1, a new year-round, off-road pathway would be a great improvement for year-round recreation within GTNP. It would not only provide an improved location for the CDST , but also provide a location for bicycle traffic to be moved off Highway 89/287 and improve summer visitor experience and safety. The existing utility corridor could be utilized to a great extent and existing overhead utilities could be buried along the new pathway to improve park aesthetics and also improve utility service by isolating them from weather caused outages. Consideration should be given to starting this new off-road pathway at the east boundary of GTNP instead of at Moran.

- *Improve grooming along the Grassy Lake Road in cooperation with the State of Wyoming and Fremont County, Idaho. Allow permitted access by commercial snowmobile outfitters.*

Justification: The Grassy Lake Road provides an important connection from JDR, GTNP, the CDST and State of Wyoming trails to trails by Fremont County, Idaho and the State of Idaho. This section also provides an opportunity to disperse snowmobile traffic out of, or around, YNP. Grooming needs to be increased and improved on this trail to accomplish dispersing this traffic. Additionally, commercial outfitters should be allowed access to this trail (they are currently prohibited by NPS) for their extended trips, which will take pressure off YNP routes.

- *Continue motorized use by both snowmobiles and snowplanes on the frozen surface of Jackson Lake.*

Justification: Self-explanatory as per our comments in Chapters 1 and 2

- Provide *expanded* non-motorized opportunities *away from main motorized routes by providing expanded non-motorized access within the interior of GTNP along the Teton Park Road* and the Moose-Wilson Road *(snowmobile use would be eliminated from this interior area).* Continue non-motorized opportunities in the Flagg Ranch area.

Justification: This action will go a long ways toward providing "gentle nonmotorized opportunities near population centers", an issue which was identified in the GYCC Assessment and EIS scoping. It will also provide an alternate opportunity versus traveling to the "congested" interior of YNP.

It is not without controversy, however. Local snowmobilers in the Jackson area feel like they are being squeezed out of yet one more area. While use numbers have not been high, it has still been important snowmobile access for locals. It has also served as fishing access to the Jenny Lake area. Additionally, locals still feel the Potholes closure is unwarranted. The elimination of snowmobile access within the GTNP interior is clearly offered as a trade-off for improved access on the CDST.

- Continue destination and support facilities at Moose, Triangle-X, Colter Bay and Flagg Ranch *and add warming hut facilities at Signal Mountain and Jenny Lake to provide for expanded visitor and interpretive services.*

Justification: Services are important to visitors and GTNP and JDR have potential to further enhance available services with minimal effort or impact.

CHAPTER 4

OTHER COMMENTS AND TECHNICAL PROBLEMS

Section A: Comments from Wyoming Game and Fish Department relative to Grand Teton National Park, submitted by Bill Wichers, Deputy Director.

Terrestrial Considerations
The preferred alternative (Alternative B) will have essentially the same impacts to terrestrial wildlife as the No Action alternative, and we believe that these impacts will often be significant in Grand Teton. Disturbance and harassment of wintering wildlife, particularly during harsher winters and during the latter part of most winters, takes a toll on energy reserves of big game and other species in the area.

Winter recreation, both motorized and nonmotorized, in Grand Teton and adjacent Forest lands has been a major concern of the Department in the Jackson Region since the mid-1980's. In unrestricted National Forest lands and in some areas of Grand Teton National Park, we have observed a shift in animal distribution due to increases in winter recreation activities. The preferred alternative calls for adaptive management and mitigation of impacts based on monitoring results. While this is a good implementation idea, we have previously made comments on where mitigation is already known to be needed. These are reiterated as follows:

- The areas of concern in Grand Teton National Park include the Spread Creek and Elk Ranch Reservoir area, Blacktail Butte, Ditch Creek and Prospector Peak. The Spread Creek-Elk Ranch Reservoir area is a major wintering area for elk and moose. We recommend this area be closed to human presence from December 15 - April 30 to protect wintering big game.

- Ditch Creek is another important wintering area for elk and moose, and disturbance from residents and recreationists in this area is increasing. We recommend the winter range maps (consider to) designate travel routes for nonmotorized use only in this area.

- In the Blacktail Butte area, snowboarders and skiers have forced animals off some of the slopes and into less desirable northern and eastern slopes on the Butte. We recommend this area to be closed to winter use (human presence) from December 15 - April 30 to protect wintering big game.

- In the Prospector Peak area, back-country skiing is increasing, and is impacting winter bighorn sheep habitat. Recreationists are drawn to this area because they are able to ski among the sheep. We recommend evaluation of winter use and bighorn sheep distribution in this area. A study has just been completed by Grand Teton personnel that shows Prospector Mountain and Mount Hunt as important sheep winter range.

- We suggest the snowmachine trail from Lost Creek to Antelope Flats be considered for closure. It is our impression that though this area currently receives limited use, keeping it open adds to the wildlife disturbance in this area, and this disturbance will increase if commercial operators start using this trail.

Aquatic Considerations
We are opposed to the phase-out restriction of snowmobiles to Jackson Lake (or the elimination of snow planes). We feel this will unjustly limit recreational fishing use of the lake during the winter.

Editorial Comments on the DEIS are as follows:

Page 107 - Aquatic Resources. The Snake River cutthroat is not considered a species of special concern by the Wyoming Game and Fish Department. It is classified only as a native game fish. However, it should be noted in this document that the U.S. Fish and Wildlife Service has been petitioned to list the Yellowstone cutthroat trout under the Endangered Species Act. In that petition, the Snake River cutthroat is included as a form of the Yellowstone subspecies. The Wyoming Game and Fish Department considers Yellowstone and Snake River cutthroats to be distinct subspecies.

Although the leatherside chub does occur here, it may have been introduced to the drainage sometime during the last sixty years. Within its native range, the leatherside chub is considered to be a Status 1 species.

Page 120 - Reptiles and Amphibians (continued from previous page). The spotted frog is not considered to be a species of special concern by the State of Wyoming. In addition, only the southern population of the boreal toad is considered as such (Status 2). Boreal toads in the Greater Yellowstone Area are not considered as a species of concern.

Appendix G. The Yellowstone cutthroat trout is classified as a Status 3 species in the State of Wyoming. Also see comment on leatherside chub above.

Section B: Comments from Wyoming Department of Environmental Quality - Air Quality Division, submitted by Dan Olson, Air Quality Division Administrator.

November 5, 1999

Through: Kim Raap – Cooperating Agency Liaison, Wyoming Department of Commerce

Mr. Clifford Hawkes
National Park Service
12795 West Alameda Parkway
Lakewood, CO 80228

Re: Winter Use Plan Draft Environmental Impact Statement

Dear Mr. Hawkes:

The Air Quality Division of the Wyoming Department of Environmental Quality has reviewed the Winter Use Plan Draft Environmental Impact Statement for the Yellowstone and Grand Teton National Parks and John D. Rockefeller, Jr., Memorial Parkway. Attached you will find the Division's specific comments.

I would like to bring to your attention that numerous statements made throughout the document that cite carbon monoxide (CO) ambient air quality standards violations, or exceedances, are incorrect and should be deleted. Non-reference method sampling and analysis methodology (e.g., CO bag sampling) cannot be used to determine compliance with National or state ambient air quality standards. To the Division's knowledge there is no evidence that CO ambient air quality standards have been violated at Yellowstone National Park, Grand Teton National Park or John D. Rockefeller, Jr., Memorial Parkway.

If you should have questions regarding the comments, please feel free to contact this office.

Sincerely,

Dan Olson
Air Quality Division Administrator

cc: Dennis Hemmer, Director
Darla Potter, Visibility, Smoke Management, & EIS Coordinator

Page #	Paragraph/ Sentence	Comments
Volume I		
xiii	Table S-2 – Air Quality Columns – Alternative A and C	Alternative A, 4th Bullet – "...may affect designation as a Class I clean air area." Alternative C, 2nd Bullet – "...improve protection designation as a Class I clean air area." These statements are incorrect. Yellowstone National Park and Grand Teton National Park were established as Mandatory Class I Federal Areas (44 CFR 69124, November 30, 1979) and may not be redesignated. Please revise both of these sentences by deleting the words "Class I".
45	Table 4 – Air Quality Columns – Alternative A and C	Alternative A, 4th Bullet – "...may affect designation as a Class I clean air area." Alternative C, 2nd Bullet – "...improve protection designation as a Class I clean air area." These statements are incorrect. Yellowstone National Park and Grand Teton National Park were established as Mandatory Class I Federal Areas (44 CFR 69124, November 30, 1979) and may not be redesignated. Please revise both of these sentences by deleting the words "Class I".
93	Table 8	The ambient air quality standards for carbon monoxide are not just concentrations and averaging periods. The ambient air quality standards consist of a specified method of sampling and analyzing the ambient air as well as specific concentrations and averaging periods. Please add the following footnote to specify the sampling and analysis method for the CO ambient air quality standards. "Reference Method as described in 40 CFR §50.11 Appendix C, or an Equivalent Method"
94	2nd full paragraph 1st sentence	"...air quality standards were occasionally exceeded on high snowmobile days at the West Entrance and Old Faithful corridor in YNP and at Flagg Ranch in GTNP." SEE COMMENT A
94	2nd full paragraph 2nd sentence	"...Montana 1-hour standard for CO was matched or exceeded." SEE COMMENT A

Page #	Paragraph/ Sentence	Comments
94	last paragraph 1st sentence	"Table 9" should be "Table 10".
94 & 95	Table 9 and 10	Please footnote the sampling method used in the collection of these concentrations.
95	4th paragraph 1st sentence	"Violation of national standards did not appear..." SEE COMMENT A
95	2nd to last paragraph	The Air Quality Division disagrees with the interpretation in this paragraph. The ambient air quality standards are designed to safeguard all of the population from infants to the elderly, not just highways. The ambient air quality standards were developed with corresponding monitoring methodologies and siting criteria. Reference method carbon monoxide (CO) monitors are to be sited at locations where CO levels would be expected to be the highest, and at locations where air flow is not restricted or affected by physical structures.
95	last paragraph 1st sentence	"...no NAAQS violations occurred..." SEE COMMENT A
95	last paragraph 4th sentence	"Concentrations here exceeded levels established by the government to protect public health ..." SEE COMMENT A
107	last paragraph 2nd sentence	This sentence fails to mention any local point sources (e.g., propane and oil heaters, generators) that operate within YNP, GTNP, and The Parkway. Please revise this sentence to include any local point sources within YNP, GTNP, and The Parkway.
107	last paragraph 3rd sentence	What is meant by "ambient sources" of pollution in this sentence? If the sentence is in reference to anthropogenic (man-made) sources please use the correct terminology and substitute "anthropogenic" for "ambient".

Page #	Paragraph/ Sentence	Comments
108	2nd paragraph 4th sentence	The method described in this sentence for an area to become non-attainment for CO is incorrect. The CO standard is not to be exceeded more than once in a one-year period. This is for both federal and state 1-hour and 8-hour CO ambient air quality standards.
108	Table 14	A portion of this table is incorrect. The State of Wyoming has not yet adopted the new $PM_{2.5}$ national ambient air quality standards.
109	4th paragraph 2nd sentence	Please specify the sampling method used in the collection of these concentrations.
109	last paragraph 6th sentence	Information at four NADP sites within and near the Bridger-Teton NF is readily available at the following website http://nadp.sws.uiuc.edu/nadpdata/ .
161	4th full paragraph 1st sentence	"...will be exposed to air pollutant emissions that violate the NAAQS and state air quality standards for Idaho, Montana, and Wyoming." SEE COMMENT A
164	3rd paragraph 3rd sentence	"... often experience problems with air quality." What "problems" are being referenced in this sentence? Please be specific.
164	3rd paragraph 4th sentence	"...concentrations of carbon monoxide that exceeded air quality standards for the EPA..." SEE COMMENT A
165	1st paragraph	When information from current research and more detailed studies are incorporated into the Final EIS, please make sure that the information is sited correctly when referencing compliance with National or state ambient air quality standards.
181	4th paragraph 1st sentence	"...pollutant levels reaching or exceeding EPA air quality standards have occurred ..." SEE COMMENT A

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Page #	Paragraph/ Sentence	Comments
182	1st paragraph 2nd to last sentence	"...air quality violations recorded there." SEE COMMENT A
202	1st full paragraph 2nd to last sentence	"...possibility of violation of the NAAQS and state air quality standards due to snowmobile emissions would likely be eliminated." SEE COMMENT A
208	1st paragraph last sentence	"...potentially exceeding EPA air quality standards in some locations." SEE COMMENT A
231	2nd paragraph 3rd sentence	"...to improve protection designation as a Class I clean air area." This statement is incorrect. Yellowstone National Park and Grand Teton National Park were established as Mandatory Class I Federal Areas (44 CFR 69124, November 30, 1979) and may not be redesignated. Please revise this sentence by deleting the words "Class I".
246	2nd full paragraph 1st sentence	"...possibility of violation of the NAAQS and state air quality standards due to snowmobile emissions would likely be eliminated." SEE COMMENT A
263	last paragraph 2nd sentence	What would constitute an "adverse impact"? What type of monitoring would be used to determine if an "adverse impact" is occurring?
275	2nd to last paragraph 1st sentence	"...possibility of violation of the NAAQS and state air quality standards would likely be eliminated." SEE COMMENT A
278	3rd full paragraph last sentence	"...protect YNP's designation as a Class I clean air area,..." This statement is incorrect. Yellowstone National Park and Grand Teton National Park were established as Mandatory Class I Federal Areas (44 CFR 69124, November 30, 1979) and may not be redesignated. Please revise this sentence by deleting the words "Class I".
Volume II – Appendix H		

Section C: Comments from David T. (Tex) Taylor, University of Wyoming - Department of Agricultural and Applied Economics regarding socioeconomic factors in the Winter Use Draft EIS.

My main comment is that while most of the changes are directed at snowmobilers, the economic impact analysis is based on expenditures by all winter visitors of which only 61 percent are snowmobilers. Since snowmobilers tend to spend more than other winter visitors this would tend to underestimate the total economic impact estimates. It would seem more appropriate to consider changes in snowmobiler expenditures relative to other types of visitors expenditures. Specific comments are as follows:

- Although the 17 counties considered in the GYA are linked geographically, they are not necessarily linked economically. It would be more appropriate to consider the functional economic units within the region (perhaps based upon commuting zones) and consider the economic impacts on each. The statement that total impact of winter visitors is 0.5% of the total for the GYA is not terribly relevant. [Vol. I, page 89]

- Although only 4 to 5% of annual recreational visitation to YNP occurs during the winter months [Vol. I, page 89], it does not mean that winter visitation is not important to surrounding communities. Since winter visitation occurs at a low point for tourism it may be very important to tourist businesses in these communities to help them survive between peak summer seasons.

- The EIS indicates that the poverty rate in the GYA is consistent with the 3-state region. However, in places like Jackson where the cost of housing is 176 percent of the state average, the overall cost-of-living is 132 percent of the state average, and the average earnings per job is below the state average, there is probably a lot of "defacto" poverty.

- The economic impact estimates are based on the averages of all respondents. Page 90 [of Vol. I] indicates that 61.0 percent of the respondents were snowmobilers, 9.8 percent were riding snowcoaches, and 24.6 percent were cross-country skiing. But 90.1 percent of the respondents at the west entrance were snowmobiling. Since Alternative B would almost exclusively affect snowmobilers, the resulting economic impact should be based on the expenditures for snowmobilers and not the average for all respondents. Also, the change in number of visits should consider the change in snowmobiling visits relative to the changes in other types of visits. Previous research has indicated that snowmobilers spend more than other winter visitors [Park County, WY Winter Visitor Assessment - Taylor, 1999], so estimating the impact based on all respondents would tend to underestimate the impacts. This comment would also apply to the other Alternatives since most of the changes are directed at snowmobilers, not all winter users.

Page #	Paragraph/ Sentence	Comments
H-2	1st paragraph 1st sentence	"...exceeded the State of Montana and Federal one hour CO standards." SEE COMMENT A
H-2	1st paragraph	This paragraph should discuss the reference method CO monitoring data collected during the 1998-1999 winter. Please include the following sentences at the end of this paragraph. "During the winter of 1998-1999, no exceedances of the 1-hour and 8-hour N AAQS or Montana AAQS have been recorded at the station. The largest 1-hour reading of 18.1 ppm occurred on February 13, during the 5 p.m. hour as the sleds were exiting the park. The largest 8-hour average of 8.9 ppm followed at 10 p.m. on the same date."
H-5	Table 1	Please footnote whether these emissions are actual emissions or potential emissions.
H-7	1st paragraph last sentence	"...exposed to carbon monoxide levels exceeding the national air quality standards." SEE COMMENT A

COMMENT A: Statements made throughout the document that cite CO ambient air quality standards violations or exceedances are incorrect and should be deleted. CO bag sampling and analysis methodology is not a reference method for sampling and analyzing ambient CO concentrations, therefore, the data from those samples cannot be used to determine compliance with National or state ambient air quality standards.

The Division recognizes that personal exposure standards and ambient air quality standards are both based on concentration data. However, personal exposure (NIOSH/OSHA) standards are higher and aimed at persons who are exposed to pollution during their normal course or work. It is the Division's understanding that the monitoring conducted by the National Park Service staff was to determine personal exposure levels to CO, therefore, the data from those samples should be compared to NIOSH/OSHA standards not ambient air quality standards.

- Page 88 [of Vol. I] indicates that winter recreation visitors from outside Montana, Wyoming and Idaho spent $427 per person in the GYA. It is also indicated that this amounts to$159 per person per day. This suggests that the average length of stay in the GYA is 2.7 days. Data from Morey & Associates [previously submitted to NPS by Wyoming] indicates that the average length of stay in Wyoming for winter visitors was 4.9 to 5.3 days during the 1997 and 1998 winter seasons. Data from the Wyoming Snowmobile Assessment [also previously submitted to NPS by Wyoming] indicates that the average number of days snowmobiling in Wyoming per visit for nonresidents was 5.3 days. This suggests that the average expenditures per person in the GYA for snowmobilers may be almost twice the $427 per person figure for all winter visitors.

- How was the number of "snowmobile visits" determined for the North Entrance? I believe that in most cases individuals drive through the North Entrance and then snowmobile from Mammoth. So how was this number of snowmobile visits determined for this entrance? [and how are those that arrive via Norris on the trail, and then return toward Norris, counted?]

- Since the sample of winter users did not include the Holidays (Christmas and New Years), how representative is the sample of the entire season in the GYA?

Section D: Additional Comments of the State of Wyoming Regarding Socioeconomic Impacts

As a Cooperating Agency, it is recognized that we have "special expertise" with regards to "statistical information and data on socioeconomics in Wyoming", yet NPS appears to have disregarded information provided to them. The State of Wyoming, on May 24, 1999, submitted detailed analysis regarding socioeconomic impacts from proposed Alternatives A-G. While this information was wholly ignored by NPS and was not used to calculate impacts from the various proposed alternatives, we believe our projected impacts remain valid, and if anything are conservative. We therefore re-submit this data and request that it be used to either replace or augment socioeconomic data in the DEIS.

ANALYSIS ASSUMPTIONS

In calculating the economic impacts detailed below, Wyoming has made several assumptions. Those are:

- The reason people travel to YNP/GTNP/JDR in the winter is to have an outdoor, oversnow, winter experience and to view the thermal, wildlife, and scenic features in a winter setting

- Closing the West Yellowstone access to snowmobile/snowcoach use will relocate those recreational users into the National Forests to the west of YNP, reducing Wyoming's revenue stream from park expenditures

- An insignificant number of displaced motorized oversnow vehicle users will relocate to the north, east, and south entrances because the infrastructure at those entrances cannot support significant additional use

- In essence, closure of park access through West Yellowstone eliminates 100% of those snowmobile users from park visitation

- Visitation numbers have likely fluctuated artificially in the last few years because of NPS administrative decisions and publicity regarding potential road closures. To counteract any artificial impacts, the State is analyzing economic impacts within a range of the peak winter visitor use season and lowest winter visitor use season out of the past 10 years for YNP and out of the past six years for GTNP and JDR (seasons prior to 1994-95 were not considered for GTNP and JDR because 1994-95 is the year the CDST opened; thus, comparisons to visitation prior to 1994-95 would not reflect the current condition or allow analysis of impacts related to the CDST).

- The peak winter season for YNP is 1992-93: total snowmobile visitors - 91,196, north - 2,712, west - 62,590, south - 23,665, east - 4,075; total snowcoach visitors - 14,340, north - 2,816, west - 8,241, south - 3,274, east - 9 [Tables 21-26, Vol I, pages 143-147]

  The peak winter season for GTNP is1997-98: GTNP snowmobiles - 4,051, CDST snowmobiles - 2,318 [Table 29, Vol. I, page 148]

  The peak winter season for JDR is1994-95: 21,748 [Table 29, Vol. I, page 148] outfitter snowmobile visitors - 13,675 [personal communication / George Helfrich 5/11/99]

- The lowest winter season for YNP is 1996-97: total snowmobile visitors - 71,759, north - 2,080, west - 50,296, south 16,526, east - 2,857; total snowcoach visitors - 10,221, north - 1,811, west - 5,752, south - 2,658, east - 0 [Tables 21-26, Vol I, pages 143-147]

  The lowest winter season for GTNP is 1994-95: GTNP snowmobiles - 2,788, CDST snowmobiles - 1,394 [Table 29, Vol. I, page 148]

  The lowest winter season for JDR is1998-99: total snowmobiles - 17,110 [Table 29, Vol. I, page 148] outfitter snowmobile visitors - 8,145 [personal communication / George Helfrich 5/11/99]

- In calculating the economic impacts in YNP of each alternative, Wyoming used a total economic impact of $1,324 per non-resident visitor per trip. This figure includes the direct expenditures per person per trip within Wyoming ($774), plus the indirect secondary expenditures those dollars generate through Wyoming's various economic sectors (an additional $550 per person per trip). [1993-95 Wyoming Snowmobile Assessment, Taylor - University of Wyoming, 1995] Since we have not been allowed to survey inside YNP, we are unable to separate expenditures within the parks from expenditures outside the parks. Impacts on sales and use tax, our state's largest revenue source for the general fund, are not included and should be added on top of the stated economic impacts.

- In calculating the economic impacts in GTNP/JDR of each alternative, Wyoming used a total economic impact of $56 per resident visitor per day trip in GTNP/JDR. Day trips were assumed to be total snowmobiles minus snowmobiles using the CDST. The $56 figure includes the direct expenditures per person per trip within Wyoming ($34), plus the indirect secondary expenditures those dollars generate through Wyoming's various economic sectors (an additional $22 per person per trip). [1993-95 Wyoming Snowmobile Assessment, Taylor - University of Wyoming, 1995 and personal communication / Taylor 5/12/99] Again, we have not been allowed to survey inside GTNP or JDR and, thus, are unable to separate expenditures within the parks from expenditures outside the parks. Impacts on sales and use tax, our state's largest revenue source for the general fund, are not included and should be added on top of the stated economic impacts.

- Pending further information, snowcoach riders entering from the west gate are assumed to transfer to motorcoach riders, so there will be a loss of visitation only from snowmobile riders under Alternatives B and C

- An estimated 15% to 45% of the entrants at the north, east, and south gates spend the night in West Yellowstone, so would not visit YNP if access to West Yellowstone were closed. An estimated 5% to 10% was added to this figure to calculate the similar effect when access to Mammoth was eliminated due to road plowing or closure.

- For lack of information, we are unable to quantify the loss of visitation which will undoubtedly occur if any segment of the Grand Loop is closed.

TOTAL ECONOMIC IMPACT OF ALTERNATIVE B = minus $154,901,380 to minus $69,550,701

> **Loss of $154,901,380 to $121,353,868 in total economic impact due to elimination of all snowmobile visitation in YNP, JDR and GTNP if emissions reduction is not met by 2008-2009.**

(91,196 or 71,759 YNP snowmobilers x $1,324 total economic impact per snowmobiler = $120,743,504 to $95,008,916; 21,748 or 17,110 JDR snowmobilers x $1,324 total economic impact per snowmobiler = $28,794,352 to $22,653,640; and 4,051 or 2,788 GTNP snowmobilers x $1,324 total economic impact per snowmobiler = $5,363,524 to $3,691,312)

Loss of $82,869,160 to $66,591,904 in total economic impact due to elimination of snowmobile visitation to Old Faithful from West Yellowstone
(62,590 or 50,296 snowmobile visitors x $1,324 total economic impact per visitor)

Loss of $1,888,355 to $378,267 in total economic impact due to loss of West Yellowstone access for overnight snowmobile trips from east entrance
(4,075 snowmobilers x 35% spending the night in West Yellowstone x $1324 total economic impact per snowmobiler; 2,857 snowmobilers x 10% spending the night in West Yellowstone x $1324 total economic impact per snowmobiler)

Loss of $10,966,361 to $2,188,042 in total economic impact due to loss of West Yellowstone access for overnight snowmobile trips from south entrance
(23,665 snowmobilers x 35% spending the night in West Yellowstone x $1324 total economic impact per person; 16,526 snowmobilers x 10% spending the night in West Yellowstone x $1324 total economic impact per person)

Loss of $1,256,741 to $275,392 in total economic impact due to loss of West Yellowstone access for overnight snowmobile trips from north entrance
(2,712 snowmobilers x 35% spending the night in West Yellowstone x $1324 total economic impact per person; 2,080 snowmobilers x 10% spending the night in West Yellowstone x $1324 total economic impact per person)

Loss of $184,296 to $117,096 in total economic impact due to reduction of day visitation to GTNP interior
(2,194 or 1,394 snowmobiles x 1.5 persons/snowmobile x $56 total economic impact per person)

TOTAL ECONOMIC IMPACT OF ALTERNATIVE C = minus $98,445,221 to minus $69,550,701

Loss of $82,869,160 to $66,591,904 in total economic impact due to elimination of snowmobile visitation to Old Faithful from West Yellowstone
(62,590 or 50,296 snowmobile visitors x $1,324 total economic impact per visitor)

Loss of $1,888,355 to $378,267 in total economic impact due to loss of West Yellowstone access for overnight snowmobile trips from east entrance
(4,075 snowmobilers x 35% spending the night in West Yellowstone x $1324 total economic impact per snowmobiler; 2,857 snowmobilers x 10% spending the night in West Yellowstone x $1324 total economic impact per snowmobiler)

Loss of $10,966,361 to $2,188,042 in total economic impact due to loss of West Yellowstone access for overnight snowmobile trips from south entrance
(23,665 snowmobilers x 35% spending the night in West Yellowstone x $1324 total economic impact per person; 16,526 snowmobilers x 10% spending the night in West Yellowstone x $1324 total economic impact per person)

Loss of $1,256,741 to $275,392 in total economic impact due to loss of West Yellowstone access for overnight snowmobile trips from north entrance
(2,712 snowmobilers x 35% spending the night in West Yellowstone x $1324 total economic impact per person; 2,080 snowmobilers x 10% spending the night in West Yellowstone x $1324 total economic impact per person)

Loss of $184,296 to $117,096 in total economic impact due to reduction of day visitation to GTNP interior
(2,194 or 1,394 snowmobiles x 1.5 persons/snowmobile x $56 total economic impact per person)

Loss of $1,280,308 in total economic impact due to loss of one month (2/15-3/15) of visitation to northern part of park due to plowing road from Mammoth to Madison
(*Loss of $697,748* [527 snowmobilers 2/15-3/15x $1,324 total economic impact/person, north entrance], + *loss of $582,560* [440 snowcoaches 2/15-3/15 x $1,324 total economic impact per person, north entrance] *Note: calculation based upon 1996-97 (low) season figures __only__ since1992-93 (high) season monthly figures were not available to us.*

TOTAL ECONOMIC IMPACT OF ALTERNATIVE D = minus $124,800,760 to minus $98,011,592

Loss of $120,743,504 to $95,008,916 in total economic impact due to elimination of snowmobile visitation in YNP due to 60 decibel sound level.
(91,196 or 71,759 snowmobilers x $1,324 total economic impact per snowmobiler)

Loss of $3,872,960 to $2,885,580 in total economic impact due to elimination of day and CDST visitation in GTNP

(*Loss of $184,296 or $117,096 [*2,194 or 1,394 snowmobiles x 1.5 persons/snowmobile x $56 total economic impact per day snowmobiler], + *loss of $3,688,664 or $2,768,484* [1,857 or 1,394 snowmobiles x 1.5 persons/ snowmobile x $1324 total economic impact per CDST snowmobiler)

Loss of $184,296 to $117,096 in total economic impact due to elimination of day visitation to GTNP interior

(2,194 or 1,394 snowmobiles x 1.5 persons/snowmobile x $56 total economic impact per person)

Outfitters will also lose their investments in snowmobile rental fleets

TOTAL ECONOMIC IMPACT OF ALTERNATIVE E = At least minus $47,064,488 to minus $36,866,040

Over the immediate short-term in YNP, the economic impact is probably none. However, if scientific studies and monitoring lead to closures, the impacts would quickly multiply, similar to those in other alternatives with closures.

Loss of $47,064,488 to $36,866,040 in total economic impact due to elimination of day and CDST visitation in GTNP and JDR

(*Loss of $184,296 or $117,096 [*2,194 or 1,394 snowmobiles x 1.5 persons/snowmobile x $56 total economic impact per GTNP day snowmobiler], + *loss of $3,688,664 or $2,768,484* [1,857 or 1,394 snowmobiles x 1.5 persons/ snowmobile x $1324 total economic impact per CDST snowmobiler], + *loss of $43,191,528 or $33,980,460* [21,748 or 17,110 snowmobiles x 1.5 persons / snowmobile x $1,324 total economic impact per JDR snowmobiler]

Over the long-term, there undoubtedly will be some reduction of business in all 3 parks due to loss of the Continental Divide Snowmobile Trail, but no information is available with which to predict what reductions in visitation and revenues might occur

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TOTAL ECONOMIC IMPACT OF ALTERNATIVE F = minus $164,691,296 to minus $120,074,740

Loss of $93,780,244 to $74,207,552 in total economic impact due to elimination of visitation from west entrance

(*Loss of $82,869,160 or $66,591,904* [62,590 or 50,296 snowmobilers x $1,324 total economic impact per snowmobiler], + *loss of $10,911,084 or $7,615,648* [8,241 or 5,752 snowcoachers x $1,324 total economic impact per snowcoacher])

Loss of $7,319,072 to $5,151,684 in total economic impact due to elimination of visitation from north entrance

(*Loss of $3,590,688 or $2,753,920* [2,712 or 2,080 snowmobilers x $1,324 total economic impact per snowmobiler], + *loss of $3,728,384 or $2,397,764* [2,816 or 1,811 snowcoachers x $1,324 total economic impact per snowcoacher])

Loss of $2,427,885to $567,400 in total economic impact due to loss of West Yellowstone access for overnight snowmobile trips from east entrance

(4,075 snowmobilers x 45% spending the night in West Yellowstone x $1324 total economic impact per snowmobiler; 2,857 snowmobilers x 15% spending the night in West Yellowstone x $1324 total economic impact per snowmobiler)

Loss of $14,099,607 to $3,282,064 in total economic impact due to loss of West Yellowstone access for overnight snowmobile trips from south entrance

(23,665 snowmobilers x 45% spending the night in West Yellowstone x $1324 total economic impact per person; 16,526 snowmobilers x 15% spending the night in West Yellowstone x $1324 total economic impact per person)

Loss of $47,064,488 to $36,866,040 in total economic impact due to elimination of day and CDST visitation in GTNP and JDR

(*Loss of $184,296 or $117,096* [2,194 or 1,394 snowmobiles x 1.5 persons/snowmobile x $56 total economic impact per GTNP day snowmobiler], + *loss of $3,688,664 or $2,768,484* [1,857 or 1,394 snowmobiles x 1.5 persons/ snowmobile x $1324 total economic impact per CDST snowmobiler], + *loss of $43,191,528 or $33,980,460* [21,748 or 17,110 snowmobiles x 1.5 persons / snowmobile x $1,324 total economic impact per JDR snowmobiler]

TOTAL ECONOMIC IMPACT OF ALTERNATIVE G = minus $171,680,952 to minus $131,874,956

Loss of $120,743,504 to $95,008,916 in total economic impact due to elimination of snowmobile visitation in YNP
(91,196 or 71,759 snowmobilers x $1,324 total economic impact per snowmobiler)

Loss of $47,064,488 to $36,866,040 in total economic impact due to elimination of day and CDST visitation in GTNP and JDR
(*Loss of $184,296 or $117,096* [2,194 or 1,394 snowmobiles x 1.5 persons/snowmobile x $56 total economic impact per GTNP day snowmobiler], + *loss of $3,688,664 or $2,768,484* [1,857 or 1,394 snowmobiles x 1.5 persons/ snowmobile x $1324 total economic impact per CDST snowmobiler], + *loss of $43,191,528 or $33,980,460* [21,748 or 17,110 snowmobiles x 1.5 persons / snowmobile x $1,324 total economic impact per JDR snowmobiler]

Outfitters will also lose their investments in snowmobile rental fleets

Section E: Comments from Wyoming Business Council (formerly Wyoming Department of Commerce) on the socioeconomic factors in the Winter Use Draft EIS–submitted by Tucker Fagan, Chief Operating Officer

November 26, 1999

Through: Kim Raap–Cooperating Agency Liaison, Wyoming Department of Commerce

The health and vitality of the national parks, the gateway communities and the entire state's economy are inextricably tied together. Tourism is considered one of the three "foundation industries" in Wyoming due to its contribution to the overall economy. Because it plays such a key role in our citizen's lives any proposed change that may adversely affect our citizen's well-being must be done with requisite, verifiable facts and without preconceived outcomes. The citizens of Wyoming and for that matter the United States look to all sides of the issue before us and demand a best effort to arrive at a solution that they can understand, agree with and one that treats all issues in a balanced manner.

The constrained time lines, the failure to comply with deadlines, the lack of willingness to share data, the absence of "good science," the lack of cooperation to survey visitors to the three park units all provide evidence that the best solution is not understood and thus most probably will not result. Such a process violates the trust any citizen expects.

The right way is to invest the proper time and resources to find the right or most correct answer. We propose a jointly funded study (National Park Service, Wyoming, Montana and Idaho) to be performed by an independent third party. Further, the study should be reviewed by personnel from the applicable state universities in Wyoming, Montana and Idaho to verify the method, data and to identify any possible bias.

This proposed joint study should be the first of the Adaptive Planning Approach suggested on page one and throughout the State of Wyoming comments. Consensus is the cornerstone of democracy. Consensus should be the hallmark of this vitally important study.

There is a large body of data relative to the economy and the social impact economic commerce has on people and communities. However, the current data was not gathered premised on the Alternatives proffered by the NPS. Interpolating this information cannot stand up to scientific scrutiny. For example, the following table lists annualized retail expenditures for areas of direct impact. This is "hard," up-to-date, reliable data. We currently do not have a breakdown attributable to the winter season and more specifically what is spent by winter vacationers. This latter data is crucial for the EIS.

Annualized Retail Expenditures

Figures are in millions ($000)

	Total Retail	Food Service	Transportation	Leisure/Entertainment
Wyoming	$2,771,481	$864,764	$837,861	$266,178
90 Mile Radius from West Thumb (WY, MT, ID)	$741,097	$232,458	$225,069	$70,903
Jackson Hole	$75,883	$23,028	$23,275	$7,671
Teton County	$100,977	$30,660	$30,929	$10,138
Cody	$84,493	$26,273	$25,580	$8,083
Park County	$148,347	$46,214	$44,955	$14,063

The above presents data for the two "cooperating counties" in Wyoming. Snowmobiling and winter tourism are activities that are growing across the other 21 counties in the state. The draw by the national parks in the northwest corner has an impact throughout these other counties as well. Visitors traveling to the parks have the opportunity and often partake in winter sports, lodging etc. at the many other available venues. The impact is thus not only state-wide but region-wide.

The figures in the table show there are significant expenditures in the target area. Studies suggest percentages for how much of the above is attributable to the winter season. Because this DEIS has such a wide-ranging and significant impact, the word "suggest"should not be part of the methodology. On the contrary, verifiable, "hard data" should be the test. The only course is to go back and do the analysis correctly. This time with all procedures and data open to the public in accordance with a scientific method.

Section F: Additional Comments on Miscellaneous Topics

Use of Groomed Roads by Bison

The issue that "grooming roads for winter visitor access causes unnatural migration of bison" has been proven to be largely without basis and therefore should be addressed by the FEIS. ["The Ecological Effects of the Use of Groomed Roads by Bison in Yellowstone National Park", Garrott and Bjornlie, 9/98 draft] According to their progress report, "only 8 percent of bison travel took place on the groomed roads during the road grooming period; most travel (62%) took place off of roads and established trails; bison appeared to use waterways as off-road travel corridors".

Interrelationship of Parks and Surrounding Communities

During the DEIS public hearings held by NPS, there was a reoccurring statement made by environmental groups and some individuals that "the parks don't owe business owners or local communities a living". While no one is "owed" anything, the EIS cannot ignore the importance of the interdependence between the parks and the surrounding communities, and for that matter, the businesses which are located within those communities.

The importance of this relationship was recognized by NPS when it stated, "Yellowstone National Park plays a prominent role in the social and economic life of the Greater Yellowstone Area." and "The gateway communities provide food, lodging, gasoline and other automotive supplies and services, as well as souvenirs and other goods to the motoring public." [*Yellowstone National Park Environmental Assessment - Temporary Closure of a Winter Road*, page 24, 11/97] If the infrastructure were not provided in the gateways, there would be additional significant impacts to resources and infrastructure within the parks. At a time when sewer systems are already overtaxed and leaking in Yellowstone, this would be both undesirable and unacceptable. The bottom line is that the parks *need* the support services which are provided by the businesses within the gateway communities.

This interrelationship extends to areas like healthcare. Because of the gateway communities, both park employees and visitors have a full range of quality medical care services available withing minutes of the parks. Some park employees also take advantage of schools and libraries located in these gateway communities. Without this interrelationship and interdependence, there would not be economic viability of individual businesses to provide a solid tax base, which in turn serves as a foundation for funding the hospitals, schools, libraries, fire departments, law enforcement, ambulances and EMS services, along with the numerous other amenities related to communities.

Effects of Snowmobile Use on Snowpack and Water Quality

There have been a lot of effects implied due to snowmobile emissions being deposited in snowpack and then, supposedly, polluting water when the snow melts and runs-off into streams and rivers. This concern has been found to be without substantial basis. [*Effects of Snowmobile Use on Snowpack Chemistry in Yellowstone National Park*, USGS Water-Resources Investigations Report 99-4148, 1998] While "clear patterns emerged to establish ammonium and sulfate as reliable indicators of snowmobile emissions in nearby snowpacks, nitrate concentrations were found to not be influenced much by these local effects". Other finding included, "contamination from snowmobiles is less likely 50 m from highway corridors (groomed roads); hydrocarbon levels in the snowpacks near snowmobile use were elevated relative to background snowpack chemistry in the study, but lower in general than concentrations at hundreds of locations nationwide; and drinking water standards for benzene, toluene and xylene published by EPA far exceed any levels detected in either snow or snowmelt runoff at Yellowstone". The bottom line is that the analysis found "that elevated emission levels in snow along highway corridors generally are dispersed into surrounding watersheds at concentrations below levels likely to threaten human or ecosystem health".

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Cover letter. Re: Non-support of proposed alternative and support of proposed alternative. See the following two responses, below.
Page 1. Re: Concerns. The EIS analysis is aimed at developing a programmatic plan (§1508.18(b)(2) and (3)) for winter use. For concerns relating to gaps in information, it should be noted that there is no burden to develop site-specific information to support a programmatic planning document. Without further information, we are unable to address general concerns as to what is meant by inadequate science. An EIS is not, per se, a scientific analysis. It is intended to disclose environmental effects over a range of alternatives, in which the analyses must demonstrate scientific integrity by disclosing methods and making explicit references to sources used (40 CFR 1502.24). The DEIS does this. CEQ regulations also allow for incomplete or unavailable information, by describing procedures that are to be following in these instances (§1502.22). Any identified gaps in the FEIS will follow the requisite procedures. Also, there is no requirement in CEQ regulations (§1502.14) to justify a preferred alternative. The requirement is to identify one or more alternatives as preferred in the DEIS if there is a preference. The agency must express a preferred alternative in a Final EIS.
Page 1. Re: Support for Revised Alternative E. See above response. Comments place a great deal of emphasis on support or justification for a course of action or decision. Under the CEQ regulations, the requirement in an EIS is to provide a range of reasonable alternatives that clearly define the issues, and to fully evaluate and disclose the possible effects of those alternatives. The DEIS meets this requirement. Comments of support or nonsupport go to the decision to be made; they do not affect the range alternatives considered.
Page 2. Re: Revised Alternative E. Revised Alternative E comes from cooperating agencies and the Blue Ribbon Coalition in a variety of forms. The essentials of Revised Alternative E, all versions considered, are not significantly different from alternative E as presented in the DEIS, especially considering the programmatic nature of the proposed action. See the matrix comparison of Revised Alternative E versus the features analyzed in the range of alternatives. All alternatives in the DEIS meet the purpose and need for action to a greater or lesser degree. For any alternative that incorporates adaptive management as its chief feature, the Final EIS will be modified to include more explanation of that process and its resource focus.
Page 2. Re: Revised Alternative E. All alternatives in the DEIS meet the purpose and need for action to a greater or lesser degree. It is unrealistic to expect all alternatives in an EIS to meet all desired conditions expressed in the purpose and need for action equally well. Such a set of alternatives would likely have no significant differences among them.
Page 2. Re: Revised Alternative E. The DEIS purpose and need for action, desired condition, is explicit along these lines.
Page 4. Re: Advisory committee feature. The suggestion about the procedural aspects of an advisory committee very nearly replicates wording in DEIS alternative E. [NOTE: commenter states that the comments from pages 3-9 in the letter express support for proposed actions. However, much of the dialogue talks to features of alternatives that the commenter feels are not "justified". Pages 10-19 address features that are opposed by the commenter, which to a degree are duplicative of the opposition expressed in pages 3-9. In general, the tenor of these expressions of support and opposition appear to relate to the decision that the commenter would like to see NPS make. The commenter's opinions will be considered in making the final decision, but there is nothing in those opinions that substantively would alter the range of alternative features to be evaluated in the Final EIS. For example, if the features that are not supported were to be deleted from the range of alternatives then the analysis would be left only with features that the commenter agrees with. If only the actions that are supported by the commenter remain, then there is effectively only one alternative. Accordingly, the commenter concludes that there is only one alternative that warrants consideration, and that is Revised Alternative E (pages 20-28 in the comment letter). From the NEPA standpoint, the analysis cannot be limited in this fashion. Therefore, expressions of support or objection will not be responded to, in general, by changes in alternative features – they will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision. There is a very clear separation between alternatives legitimately considered in an analysis and the expression of a preferred alternative or the decision to be made.

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Page 4. Re: Enforce current sound standards. This suggested feature is analyzed in the "no action" alternative, A. As an aside, the final selected alternative that is documented in a record of decision may mix features from the range of alternatives evaluated in the final EIS. Such mixing can occur as long as the mixed features are consistent with one another, and as long as the effects of such an alternative would not fall outside the range of effects disclosed in the EIS.
Page 4. Re: Natural Quiet Assumptions. The 78 dB full throttle level refers to the test procedure in 36 CFR 2.18. In 1995, passages of individual snowmobiles under constant speed cruise conditions were measured at a distance of 50 feet at Flagg Ranch. Levels ranged from 68 dB at 10 mph to 75 dB at 30 and 40 mph. In 1996, levels of 75-77 dB were measured at speeds up to 55 mph in controlled tests near Jenny Lake of GTNP The revisions to the DEIS will use levels typical of cruise conditions in the impact assessment. Additional work is being accomplished on the sound analysis, and needed changes will be incorporated in the FEIS.
Page 5. Re. Alternative fuel sales. This suggested feature will be considered. In consideration of the sensitivity to regulation and the time it may take for support industries to catch up, it may make more sense to encourage voluntary compliance with this provision until two years have passed. The cooperating agencies' support of such an approach is appreciated.
Page 5. Re: Late night closure. This section will be clarified in the FEIS.
Page 5. Re: Late night closure. Support of night time closure is acknowledged. This feature is in the range of alternative features analyzed, and will continue to be an option for management.
Page 5. Re: Late night closure. Support of 10 P.M. to 6 A.M. closure is acknowledged. This feature is in the range of alternative features analyzed, and will continue to be an option for management.
Page 6. Re: Nighttime Speed Limit. Support of 35 mph nighttime speed limit is acknowledged. This feature is in the range of alternative features analyzed, and will continue to be an option for management.
Page 6. Re: Information Programs Partnerships with communities would necessarily be part of any alternative to be considered. NPS views this as a standard practice to help implement management actions. Communities and organizations need to be accessible and supportive in order to implement partnership strategies.
Page 6. Re: Additional Plowing – YNP. Partly in response to the overall non-support of plowing the road, NPS expresses a new preferred alternative in the Final EIS. This alternative would provide oversnow motorized access from West Yellowstone to Old Faithful, and allow visitors to experience the Grand Loop by snowcoach.
Page 7. Re: Winter access to YNP. The alternative features being objected to and the activities being supported remain as choices within the range of alternatives being evaluated in response to the purpose and need for action. The objections to the NPS preferred alternative are noted. See earlier response to this letter in regard to page 4 "Advisory committee."
Page 7. Re: Length of Winter Season. All features considered in the range of alternatives are justifiable from an analysis standpoint. They all respond to various issues developed during scoping, or they represent a possible approach to an issue that is being contrasted with a possible approach considered in another alternative.
Page 8. Re: Use on Jackson Lake. All features considered in the range of alternatives are justifiable from an analysis standpoint. They all respond to various issues developed during scoping, or they represent a possible approach to an issue that is being contrasted with a possible approach considered in another alternative. Again, there is undue attention on the preference indicated in the DEIS, or the decision to be made.
Page 9. Re: Moving the CDST. See earlier response to this letter in regard to page 4 "Advisory committee." Though this feature is not part of the new preferred alternative, it remains as a feature in the range of alternatives.

Page 9. Re: Widened Highway CDST. This reference is not inappropriate for two reasons: similar circumstances exist in the proximity of highway vehicle traffic to snowmobile use, and GTNP responds to medical emergencies involving snowmobile use [illegible] Togwotee Pass.
Page 9. Re: Use on Grassy Lake Road. See earlier response to this letter in regard to page 4 "Advisory committee." Should motorized oversnow use on Grassy Lake Road be allowed in the eventual decision, the suggested activities could be implemented thereafter. They do not require analysis in this programmatic EIS and plan.
Page 10. Re: NPS sound and emissions standards. NPS has the responsibility to protect park resources and values. Given the issue that partly drives this EIS --that snowmobile emissions impair air quality -- it is necessary to consider alternatives that both reduce and eliminate the impairment. In regard to the assertion that NPS should defer to EPA, implying that such an alternative feature should not be considered, CEQ regulations allow the lead agency to evaluate reasonable alternatives that are not within its jurisdiction (§1502.14[c]).
Page 10. Re: Air Resources Division air quality report. This generalization ignores most of the referenced report and any number of other efforts that are correct and accurate. The report is now correct and final, and is available for use as a reference in the winter use EIS analysis.
Page 10. Re: Air Resources Division air quality report. Criticism stemming from the release of the draft summary ARD report and its content is beyond the scope of this EIS analysis and requires no response. The report, so far as the alleged faulty information, was not a part of the Draft EIS. The fact that the cooperators disagree with how the report was publicized and distributed does not affect the air resources analysis in the EIS.
Page 11. Re: Snowmobile sound levels. (basically same comment as on page 4) The 78 dB full throttle level refers to the test procedure in 36 CFR 2.18. In 1995, passages of individual snowmobiles under constant speed cruise conditions were measured at a distance of 50 feet at Flagg Ranch. Levels ranged from 68 dB at 10 mph to 75 dB at 30 and 40 mph. In 1996, levels of 75-77 dB were measured at speeds up to 55 mph in controlled tests near Jenny Lake of GTNP The revisions to the DEIS will use levels typical of cruise conditions in the impact assessment. Additional work is being accomplished on the sound analysis, and needed changes will be incorporated in the FEIS.
Page 11. Re: Personal Access. Please see the purpose and need section in the DEIS and the FEIS. Personal access may be reflected in the statements of desired condition, but personal access by snowmobile is not a right or a guarantee. The NPS mandate, as stated in the purpose and need section, places personal enjoyment and freedom of access in a subordinate role to protection of park values so they are unimpaired for future generations.
Page 11. Re: Commenter Motivation. It is not material for the EIS range of alternatives to speculate about the unstated motivations of any group of commenters. NPS notes that there may be many people who do not visit the Parks because of current use by snowmobiles.
Page 12. Re: Oversnow Transportation Choice. This comment is a reference to statements made in the DEIS that apparently the commenter agrees with. The inference is that since people choose to come in these numbers, they would not choose to experience the Park in any other fashion. The commenter seems to further infer that because this is so, and because the economies have thrived on this demand, then freedom and economic well being in the gateway communities should have priority over any impacts that this use may cause. NPS disagrees with these inferences. Please see earlier response to this letter in regard to page 11 "Personal Access."
Page 12. Re: Personal Access. The "personal access" issue is not taken lightly. All alternatives but one in the EIS allow the use of snowmobiles in varying degrees and places, depending upon the alternative concept. The impact of each alternative on visitor experience is disclosed, including impacts on snowmobile users as a group. The difficulty is that personal access via snowmobile, considering present commercial technology and usage, causes a variety of impacts on park resources, values and other visitors. Please see the purpose and need section in the DEIS and the FEIS. Personal access may be reflected in the statements of desired condition, but personal access by snowmobile is not a right or a guarantee. The NPS mandate, as stated in the purpose and need section, places personal enjoyment and freedom of access in a subordinate role to protection of park values so they are unimpaired for future generations.

[illegible]
Page 13. Re: Socioeconomics. The FEIS will report economic impacts following another review of the input from the cooperating agencies. As in the DEIS, all assumptions made in the analysis will be disclosed. According to the CEQ regulations, §1503.3(b), commenting agencies that criticize an analysis methodology should describe an alternative methodology and why it prefers it. The commenter, in this instance describes an alternative methodology, but does not specifically indicate what is incorrect about the agency method – other than it arrives at a different answer. If there is a significant difference of opinion, as there may be in this case, then the remedy provided in CEQ regulations is to report both opinions in order to meet the disclosure requirement. This approach was taken in the DEIS by reporting the results of NPS studies and the reports from each cooperating agency. Efforts will be made in the FEIS to enhance this comparison.
Page 13. Re: Shuttle Bus Cost. Subsidized access, should it be necessary, would be a consideration if this alternative were to be selected in the decision.
Page 13. Re: Plowing Roads. The stated purpose of plowing the road (DEIS, page 28) is to "improve affordable access" – not, as the commenter states, to "provide affordable access for minority and low-income people". The DEIS explains that a required impact topic in an EIS is to evaluate the effects of a proposed action on socially or economically disadvantaged populations (DEIS, page 80). These populations are characterized on page 90 in the DEIS, and the effects on them are disclosed in the socioeconomic section for each alternative (DEIS, pp 176, 199, 224, 245, 260, 274, 288). NPS disagrees that this analysis is "extremely flawed"; the stated impacts on socially or economically disadvantaged populations are not used as "justification" for plowing in alternative B. The rationale for preferring alternative B may be found on page 39.
Page 14. Re: Plowing Roads. This comment restates the disclosure of effects present in the DEIS. Many commenters refer to any disclosure of an impact as "admitting" something. Readers should understand that it is the purpose of an EIS to disclose the possible effects of a proposed action and alternatives to it, and that references to the "justification" for a preferred alternative is an entirely different issue relating to the decision to be made. Please see earlier response to this letter in regard to page 4 "Advisory Committee."
Page 14. Re: Access and available space. Please see earlier response to this letter in regard to page 4 "Advisory Committee." Any expression of available space versus visitation in the DEIS will be clarified in the Final EIS.
Page 15. Re: Shuttle Bus Experience. This comment restates the disclosure of effects present in the DEIS. Many commenters refer to any disclosure of an impact as "admitting" something. Readers should understand that it is the purpose of an EIS to disclose the possible effects of a proposed action and alternatives to it, and that references to the "justification" for a preferred alternative is an entirely different issue. NPS has persisted in describing "noise" from snowmobiles as "sound" at the request of cooperating agencies. It should be noted that many interested parties commented during scoping and during the DEIS review that snowmobiles produce unwanted noise. The section on impacts of human winter use activities on the natural soundscape will be further developed in the FEIS.
Page 15. Re: Construction and Operation Costs in Vol. II. Regarding the allegation that NPS has inflated costs to justify the preferred alternative: the FEIS preferred alternative will not be alternative B. Therefore, the point is academic. The cost analysis will be reviewed and clarified, if necessary, in the FEIS.
Page 15. Re: Plowing Roads. It is conceivable that the desired effect of an alternative action would not be achieved, or that it would have adverse consequences associated with it. It is the purpose of an EIS analysis to evaluate an action and disclose such things. The DEIS analysis will be reviewed and altered if necessary.
Page 16. Re: Converting oversnow route to mass transit. It is conceivable that the desired effect of an alternative action would not be achieved, or that it would have adverse consequences associated with it. It is the purpose of an EIS analysis to evaluate an action and disclose such things. The DEIS analysis will be reviewed and clarified if necessary.
Page 16. Re: Eliminating access from East Entrance. This comment restates the disclosure of effects present in the DEIS, pages 255-256.

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Page 16. Re: Public Safety and Avalanches. The analysis will be reviewed and supplemented with additional information if necessary.
Page 16. Re: Access and available space. Please see earlier response to this letter in regard to page 4 "Advisory Committee."
Page 17. In terms of use, the effect is minimal. NPS acknowledges that such a change could impact local businesses, particularly those catering to the snowmobile visitor immediately outside the park. NPS is also aware that other opportunities for winter visitors exist on the Shoshone National Forest, including a downhill ski area, groomed cross-country ski trails and many opportunities for backcountry activities. In recent years, winter marketing priorities outside the east entrance have favored snowmobile users. Please see earlier response to this letter in regard to page 13 "Socioeconomics".
Page 17. Re: East Entrance. This comment is speculative. No further response is necessary.
Page 17. Re: Use of military ordinance. This administrative procedure is always available to park managers, to be implemented as conditions arise. See previous response, above.
Page 17. Re: Access and available space. The FEIS will report economic impacts following another review of the input from the cooperating agencies. As in the DEIS, all assumptions made in the analysis will be disclosed. According to the CEQ regulations, §1503.3(b), commenting agencies that criticize an analysis methodology should describe an alternative methodology and why it prefers it. The commenter, in this instance describes an alternative methodology, but does not specifically indicate what is incorrect about the agency method – other than it arrives at a different answer. If there is a significant difference of opinion, as there may be in this case, then the remedy provided in CEQ regulations is to report both opinions in order to meet the disclosure requirement. This approach was taken in the DEIS by reporting the results of NPS studies and the reports from each cooperating agency. Efforts will be made in the FEIS to enhance this comparison.
Page 18. Re: Socioeconomics. This comment is speculative. No further response is necessary.
Page 18. Re: Proposed closures. Please see the purpose and need section in the DEIS and the FEIS. Personal access may be reflected in the statements of desired condition, but personal access by snowmobile is not a right or a guarantee. The NPS mandate, as stated in the purpose and need section, places personal enjoyment and freedom of access in a subordinate role to protection of park values so they are unimpaired for future generations. Please see earlier response to page 12 "Oversnow Transportation," page 11 "Personal Access," and page 12 "Personal Access." See also NPS mandates and purpose and need for action in Chapter I of the FEIS. Alternative F was developed to address wildlife issues specifically. One consequence of the alternative, as disclosed in the DEIS, is that there would be no access to those areas. To object to this feature, and others, is to object to having a range of alternatives that sharply define the issues (§1502.14).
Page 18. Re: Snow plowing changes. Please see earlier response to this letter in regard to page 4 "Advisory Committee."
Page 18. Re: Snow plowing changes. This statement of effects is speculative. Other facilities operate effectively using oversnow transport. Should Flagg Ranch become an oversnow destination, NPS feels that it could adapt and take advantage of a new set of opportunities for winter recreation experiences.
Page 18. Re: Snow plowing changes. As is the case with nearly any other alternative feature, there would be consequences associated with not plowing the road from Colter Bay to Flagg Ranch. It is interesting to contrast the commenter's criticism of this feature with its criticism of plowing the road from West Yellowstone to Old Faithful in alternatives B and C. The contrast presents a contradiction, from which NPS concludes the only acceptable form of access in the state's opinion is that represented by the status quo. Please see earlier response to this letter in regard to page 4 "Advisory Committee."
Page 19. Re: Elimination of the CDST. Please see earlier response to this letter in regard to page 4 "Advisory Committee." NPS acknowledges the importance of the CDST to Wyoming and Idaho.
Page 19. Re: Elimination of the motorized winter use on Jackson Lake. If ice fishing is the premier reason for using snowmobiles or snowplanes on Jackson Lake, there are other modes of access for this purpose. Please see earlier response to this letter in regard to page 4 "Advisory Committee."

Page 22. Re: Bio-based fuel sales. This comment is similar to an earlier point made on page 5 of the letter. The suggestion for immediate implementation of a synthetic oil and bio-fuel requirement is tempting. In consideration of the average visitor and of support industries, it may make more sense to encourage voluntary compliance with this provision until two years have passed. In the past, people have reacted strongly to a perception of "heavy handed regulation" on the part of federal agencies. The cooperating agencies' support of such an approach is appreciated. [Note: this letter presents a "Revised Alternative E" for consideration on pages 20-28. Features of this alternative were for the most part analyzed throughout the range of alternatives in the DEIS. Please refer to the matrix which illustrates where the features of Revised E are evaluated in the DEIS. The matrix can be found in Chapter I of the FEIS under Alternatives Suggested During the Public Comment Period.]
Page 22. Re: Interim carrying capacity. NPS is encouraged by support from the cooperating agencies on establishing a recreation carrying capacity. In practice, setting a carrying capacity is a highly complex and potentially divisive exercise. NPS managers decided there was not sufficient time available in the settlement time frame to devote to this type of analysis. More explanation of the carrying capacity issue will be included in the FEIS. NPS will provide analysis in the alternatives mitigation to look at interim limitations on use, one of which will be at the seven year average level.
Page 23. Re: Alternatives C, D and G conceptually include the opening of such facilities to one degree or another. A reference to other plans and environmental analysis on page 17 of the DEIS includes commercial services plans for both parks. Since these plans were in process, the decision was made not to include analysis of facilities being addressed elsewhere.
Page 23. Re: Educational video Partnerships with communities would necessarily be part of any alternative to be considered. NPS views this as a standard practice to help implement management actions. Communities, organizations and NPS need to be mutually accessible and supportive in order to implement partnership strategies such as the suggested video. As an implementation detail, no further response to this comment will be made.
Page 24. Re: Educational Video. Both NPS and concessionaires employ ongoing safety programs, snowmobile user certification or training. Regardless, such programs should be enhanced, improved and implemented to eradicate preventable accidents.
Page 25. Re: Scientific studies and monitoring: published studies and monitoring reports should as a matter of course be available to the public. This information should not be subjected to a political process in advance of their publication. There are policies and protocols already in place to ensure appropriate scientific review. If future studies or monitoring indicate the need for management action, NPS will follow the requirements already set in law (such as NEPA), regulation and policy. At that time, the scientific basis for an action can be scrutinized and criticized by any interested parties.
Page 25. Re: Continue existing plowed road access in YNP. This is a feature of alternatives A, D, E, F and G.
Page 25. Re: Expanded nonmotorized routes away from motorized routes, served by shuttle service. This suggestion is programmatically compatible with all alternatives, and could be implemented without further significant environmental review (as a function of the Winter Use EIS and the decision resulting from it). Whether solitude can actually be achieved by this separation depends upon site characteristics and the degree to which motorized use sounds travel in the area.
Page 25. Re: Restricting nonmotorized uses to designated trails. This is a feature of DEIS alternatives B, D and E. The preferred alternative in the FEIS will incorporate this measure.
Page 25. Re: Congestion and visual concerns at Old Faithful. This suggestion may be useful in site-specific implementation of any of the alternatives retaining snowmobile use at Old Faithful. It is not a key programmatic feature; i.e. it does not require an EIS analysis for approval – it could be done now.
Page 26. Re: Prepaid passes requirement at West Yellowstone– prepaid passes for other entrances. Pre-paid passes are available in West Yellowstone. Should the need arise at other entrances for the same reasons, the service could be expanded. The rationale for this measure – mitigating pollution impacts on visitors and employees – has a cost associated with it. Opportunities for necessary NPS-visitor contact at the entrance are lost. Suggesting that all visitors forego an important safety element of the park experience, so that their snowmobiles will be less polluting is clearly not in compliance with 36CFR 2.18. The regulation

states that snowmobiles are prohibited except where designated and only when their use is consistent with the park's natural, cultural, scenic and aesthetic values, safety considerations and will not disturb wildlife or damage park resources. In this case, mitigating an effect on park values and resources by completely *eliminating* an important information and safety resource for park visitors is illogical. Voluntary compliance with this management option is reasonable, but only for those visitors who wish to utilize it.
Page 27. Re: Improve grooming on the Grassy Lake Road and permit commercial outfitters. These measures do not require a programmatic EIS. They could be considered at any time.
Page 28. Re: Removal of snowmobiles from Teton Park Road. The effects of this are disclosed in visitor use and access and visitor experience for alternatives B, D, E, F and G in the DEIS.
Page 29. Re: Comments re: GTNP. 1.) Close the Elk Ranch Reservoir-Spread Creek area to public use from December 15 to April 30. According to park policy, the Buffalo Fork River floodplain and Uhl Hill are currently closed to public entry in the winter. The area between Spread Creek and Wolff Ridge is open to nonmotorized uses only. Mitigation in alternative F closes Wolff Ridge. 2.) Restrict nonmotorized travel in the Ditch Creek area to designated routes only. The commenter does not state which segment of Ditch Creek is of concern. NPS assumes it is the area east of the Antelope Flats Road to the Teton Science School. The effects of human activities on wildlife in this area are largely anecdotal and their magnitude and frequency unknown. NPS does not agree that they warrant use restrictions at this time. Instead, several alternatives in the FEIS call for implementation of an adaptive management strategy that would allow for closures to be enacted in the future should additional information become available. 3.) Close Blacktail Butte to public use from December 15 to April 30. Mitigation in alternative F closes Blacktail Butte. 4.) Close Prospector Mountain and Mt. Hunt to backcountry skiing to protect bighorn sheep. This is a feature of alternative D. 5.) Close the trail from Lost Creek to Antelope Flats to snowmobiles. This feature is included in alternatives D, E, F, G and the new preferred alternative restricts access to nonmotorized use only.
Page 30. Re: Aquatic resources. Please see earlier response to this letter in regard to page 4 "Advisory Committee."
Page 30. Re: Editorial changes. Editorial changes regarding Aquatic Resources will be made in the Final EIS.
Page 30. Re: Editorial changes. Editorial changes regarding Reptiles and Amphibians will be made in the Final EIS.
Pages 31-36. Re: Air quality. [Note: pages 31-36 of the state's letter consist of comments from WY DEQ, Air Quality Division] References to standard exceedances will be removed where non-reference methods were used. The statement about the Class I area will be revised. FEIS will clarify references to compliance with National Ambient Air Quality Standards for carbon monoxide. Page 108, Table 14 – FEIS will clarify status of PM2.5 standard. Page 109, 4th paragraph – FEIS will clarify data methods. Page 109, last paragraph – Available data will be reviewed for applicability. Page 161, 4th paragraph, Page 164, 3rd paragraph, Page 165, 1st paragraph, Page 181 – FEIS will clarify references to compliance with National Ambient Air Quality Standards. Page 164, 3rd paragraph – Any cited "problems" will be clarified. Page 182, 1st paragraph, Page 202, Page 208, Page 246, Page 275 - FEIS will clarify references to compliance with National Ambient Air Quality Standards. Page 231, Page 278 – Class I statement will be revised. Page 263 – "Adverse impact" is defined in Table 34, page 158. No specific monitoring is identified to date. These comments are both technical and editorial in nature. All comments are being reviewed and the content of the FEIS will reflect them as needed.

STATE OF WYOMING
Pages 37-45. Re: Socioeconomic impacts. [Note: pages 37-45 of the state's letter consist of comments from David Taylor, UW economist] The primary difference between the state's analysis and that detailed in the DEIS lies in the underlying estimates of baseline visitation to the parks and in the estimates of reduction to baseline use under alternative management options. The DEIS estimate of baseline trips adjusts recorded entries to the parks by an estimate of re-entries (25% in our analysis). The state's analysis assumes all entries are separate trips from home. The DEIS analysis uses survey responses of current winter visitors to estimate the decrease in the number of trips under alternative management actions. The state's analysis assumes that no current park snowmobile users will return to the GYA under the changed management. Finally, the DEIS analysis recognizes that only visitation changes by those visitors to the GYA who reside outside of the GYA are relevant to estimation of GYA impacts. The analysis by the state assumes that all current park snowmobilers are from outside the GYA. The use of these differing assumptions of baseline use, and changes to use, lead to the widely varying estimates of changes in local area expenditures. Because of the significant differences in the two analyses, both are presented in the DEIS. The FEIS will report economic impacts following another review of the input from the cooperating agencies. As in the DEIS, all assumptions made in the analysis will be disclosed. According to the CEQ regulations, §1503.3(b), commenting agencies that criticize an analysis methodology should describe an alternative methodology and why it prefers it. The commenter, in this instance describes an alternative methodology, but does not specifically indicate what is incorrect about the agency method – other than it arrives at a different answer. If there is a significant difference of opinion, as there may be in this case, then the remedy provided in CEQ regulations is to report both opinions in order to meet the disclosure requirement. This approach was taken in the DEIS by reporting the results of NPS studies and the reports from each cooperating agency. Efforts will be made in the FEIS to enhance this comparison. The economic impact analysis has been revised with expenditures now based on the actual group indicating they would decrease (or increase) their number of trips in response to policy changes. As the comment correctly notes, most of the trip decreases are for snowmobilers, who tend to have high trip expenditures second only to snowcoach riders (Littlejohn, 1996). The analysis has also been revised from a 17-county impact region to a 5-county region to provide a quantitative measure of the change in the area most impacted. The DEIS acknowledges that winter visitation is important to surrounding communities and notes that, for example alternative B, (at p. 198) "would have a major negative impact on the West Yellowstone winter economy." The comment on "defacto" poverty provides new information that will be included in the FEIS Chapter III.
Page 38. Re: Socioeconomic impacts. NPS has not disregarded the state's information. According to the CEQ regulations, §1503.3(b), commenting agencies that criticize an analysis methodology should describe an alternative methodology and why it prefers it. The commenter, in this instance describes an alternative methodology, but does not specifically indicate what is incorrect about the agency method – other than it arrives at a different answer. If there is a significant difference of opinion, as there may be in this case, then the remedy provided in CEQ regulations (§1502.9(a)) is to report both opinions in order to meet the disclosure requirement. This approach was taken in the DEIS by reporting the results of NPS studies and the reports from each cooperating agency. Page 83 of the DEIS makes reference to the use of source information provided by the cooperators, all of which is presented in DEIS Appendix A. The characterization of the socioeconomic environment specifically cites information from the cooperators or their consultants, such as Dr. Taylor. On pages 298 through 315, the DEIS discloses the impacts of each alternative on adjacent lands in the cooperating agencies' own terms. Given this, NPS disagrees that the input from the cooperating agencies has been disregarded.
Pages 46-47. Re: Comments from Wyoming Business Council. [These pages of the state's letter consist of comments from the Wyoming Business Council] Many earlier responses are relevant to the comments in this section: e.g. responses on scientific adequacy, programmatic EISs, remedies in CEQ regulations for unavailable or inadequate information, and economic impacts. Economic studies have been conducted and the results provided to the cooperators that clearly and appropriately provide adequate information related to the DEIS alternatives, and analysis of the economic impacts of those alternatives. Also, these studies provide appropriate and adequate information that addresses the winter season and what is spent by winter vacationers As a side note, the CEQ regulations

define special expertise (the basis for state and county cooperating agency status) as "statutory responsibility, agency mission, or related program experience" §1508.26. NPS agrees that there is a need to work cooperatively (regardless of the NEPA context for "cooperating") to develop and use relevant information in park management.
Page 48. Re: Groomed roads and wildlife. This information is presented in the DEIS (page 166, et al.) reflecting a broader look at Bjornlie and Garrot.
Page 49. Re: Snowmobile use and water quality. As suggested, the analysis of impacts on snowpack and water quality will be reviewed and updated in the FEIS with respect to information that is now available. The cited report was not available to the study team for inclusion in the DEIS.

Wyoming State Legislature
213 State Capitol / Cheyenne, Wyoming 82002 / Telephone 307 / 777-7881
http://legisweb.state.wy.us

House of Representatives

REPRESENTATIVE CHARLES R. "PAT" CHILDERS
House District 50
Park County
22 Equine Drive
Cody, Wyoming 82414
Committees:
Revenue
Minerals, Business and Economic Development
Transportation of Oil, Gas and Minerals

November 23, 1999

Clifford Hawkes
Winter Use Plan Draft EIS
12795 West Alameda Parkway
Lakewood, CO 80228

Dear Mr. Hawkes:

I appreciate the opportunity to comment on the draft plans for winter use in Yellowstone Park, Grand Teton Park, and the associated areas under review. As a State Representative in rural Wyoming near these areas, I believe that it is important for the National Park Service (NPS) to have comments from state elected officials. Since I provided public comment to your agency in Cody, Wyoming, recently, I will also attach those comments for your consideration.

Noting that my previous comments that give my experience with and knowledge about the National Environmental Policy Act (NEPA), I would hope that the NPS would carefully review the Act and the Council on Environmental Quality NEPA regulations as well as the NPS NEPA regulations when considering my comments. I have a great concern about the NPS not carefully considering the Act and associated regulations in developing this draft EIS both for establishing the Preferred Alternative and utilizing a flawed air quality study in the NEPA analysis. I do oppose the NPS Preferred Alternative B for this EIS.

NEPA is clear about the need to use "Scientific" data and "Significant" impacts in the environmental analysis. The United States Supreme Court is also very clear that the agencies and "Cooperating Agencies" must make an "informed decision" about the impacts from any action in the NEPA analysis in order to minimize impacts. I do not believe that the NPS has accomplished that duty with the Preferred Alternative.

For an alternative, I do support either the "Revised Alternative E" proposed by the State of Wyoming or the Cooperative Counties or a combination of the two alternatives. I believe that those alternatives minimize impacts on any winter use in the area. These alternatives are based on sound science and are compromises from current winter use management in the Parks.

For the so-called air quality study, I was quite disturbed about the limited scope of the study as well as the document being released after the release of the draft EIS. The study should not be used for any overall area management considerations in this EIS because of its limited scope of analysis. Moreover, the late release did not allow proper consideration of the results of the study by either the public or the experts, i.e., Wyoming's Department of Environmental Quality (DEQ), which is the primacy agency over air quality in the National Parks and other areas in Wyoming. The NPS lead agency, in their consideration of air quality in the NEPA planning process for this EIS, should have included Wyoming's DEQ personnel on the interagency team since Wyoming has primacy over air quality. It is noted that the planning area is mostly in Wyoming.

I have contacted Dennis Hemmer, Wyoming DEQ Director, and this state would be willing to participate in an air quality study in the area. It would be necessary to obtain any funding from the Federal government for this study. The new air study could be used to amend the Winter Use EIS at some future date.

While this EIS and planning process are, in part, driven by a lawsuit, NEPA is the controlling Act and I seriously doubt that the Judge's decision prevents doing a proper environmental analysis. Should the NPS believe that decisions from the lawsuit are driving the process, the solicitor for the NPS should appeal the Judge's decision since NEPA is the proper forum for analyzing a proposed action and any possible impacts to the area.

In summary, I support either the state of Wyoming's or the Cooperating Counties' "Revised Alternative E" and urge excluding the so-called air quality study because of its limited scope. I support doing an air quality study for future consideration in the area land management.

Should you have any questions concerning this matter, please contact me. Thank you for allowing me to comment.

Sincerely,

Representative Pat

Representative Pat Childers
26 Equine Dr.
Cody, WY 82414
307-587-5145

attachment

cc: Governor Geringer
Kim Ramp, State of Wyoming
Park County Commissioners
Wyoming Congressional Delegation

Page 2

YELLOWSTONE and GRANT TETON NATIONAL PARKS
and ROCKEFELLER MEMORIAL PARKWAY
WINTER USE PLAN
DRAFT ENVIRONMENTAL IMPACT STATEMENT

October 26, 1999, Public Hearing Comments to National Park Service
Cody, Wyoming

Good evening, my name is Pat Childers. I am a State Representative for House District 50, Park County Wyoming, and appreciate the opportunity to comment on the draft EIS for the Park Services' Winter Use Plan. While I have not completed my review of the EIS and supporting information and will have additional written comments later, I would like to provide some initial thoughts at this time.

I have followed the development of this EIS with interest for some time and have concerns about the document. As a point of clarification, I have a fair amount of training and experience in the federal process for EA's and EIS's. 1) I have taken several training courses concerning the National Environmental Policy Act (NEPA) and the resulting Council on Environmental Quality's (CEQ) NEPA Regulations. 2) I coordinated review and comments on NEPA related documents for several years for the company that I recently retired from. 3) I helped draft and pass a Wyoming law involving the state and local governments in federal NEPA issues. and 4) I provided testimony on two occasions to Congress on NEPA issues.

The NEPA law, the CEQ NEPA regulations, the NPS NEPA guidelines, and the Supreme Court decisions are all quite clear about the procedures required in the development of EA's and EIS's for any federal actions, in my opinion. I have always felt that many of the federal land management agencies, in particular the BLM, FS, and NPS, have not properly included state and local government in the NEPA process. While the federal land management agencies have the final authority over the decisions in NEPA, the law and regulations are quite clear about the, and I quote, "in cooperation with state and local government" requirement in the procedures in NEPA.

For the National Parks and Parkway in this EIS, the NPS manages the property; however, Wyoming's state and local governments primarily have jurisdiction over many of the laws within the boundaries of those properties. Also, the states of Wyoming, Montana, and Idaho all provide the roads and services for the many tourists that frequent those properties and have a vested interest in the management of them. I believe that is one of the primary reasons that NEPA made it quite clear that the federal agencies develop the NEPA documents in cooperation with state and local governments. The lands belong to the citizens of the United States, but the adjacent states and their citizens through their state and local governments should be more involved in the management documents.

The state and local government cooperating agencies have had a difficult time getting involved and being allowed proper input into this NEPA document. I hope the NPS improves their cooperation with those cooperating agencies for the conclusion of the NEPA process. I won't bother bringing up my concerns over past issues.

I am, however, very disturbed over the air quality issues is this EIS. While the "Cooperating Agency" Memorandum of Agreement between the NPS and the state of Wyoming lays out specific duties for each entity in the NEPA process, the issue of primacy by the state of Wyoming over air quality as allowed by the EPA cannot be ignored. Most of the Parks and Parkway are in Wyoming, not Montana or Idaho. Appendix H in the EIS covers air quality. None of the studies in this report include the Wyoming Department of Environmental Quality (DEQ), who has primacy from the EPA over air quality in Wyoming. I am informed that the NPS did not include the Wyoming DEQ in the development of the air quality report recently released for this EIS nor has the DEQ been provided with a copy of the report as yet.

Since the NPS specifically states that air quality is to play a big part in any decisions in the EIS, I strongly recommend that the NPS properly clear the issues of air quality through the primacy agency, Wyoming DEQ, prior to the development of the final EIS.

Thank you for the opportunity to comment.

Pat Childers
26 Equine Drive
Cody, WY 82414
307-587-5145

Page 1. Re: NPS not carefully considering NEPA regulations, and "utilizing a flawed air quality study in the NEPA analysis." CEQ regulations have been followed scrupulously, as the planning record will show. There is no requirement in CEQ regulations (§1502.14) to justify a preferred alternative, just to name one or more alternatives as preferred in the DEIS if there is a preference. The purpose of identifying the preferred alternative is so agencies and the public can understand the lead agency's orientation (§1502.14(e)). The commenter should note that a final decision has not yet been made in consideration of the full range of alternatives in an FEIS. Comments about the rationale for or against the preferred alternative are given too much weight at the expense of the range of alternatives. The rationale for the preferred alternative does not set the scope of analysis. NEPA (CEQ Regulations) does not make stipulations about the rationale for selecting a preferred alternative in an EIS; in fact there is no requirement for stating the rationale in an EIS. It stipulates that in a final EIS, a preferred alternative must be identified. The statement of preference for one or more alternatives in a draft EIS is discretionary, depending upon whether the agency has a preference at that point (§1502.14(e)).

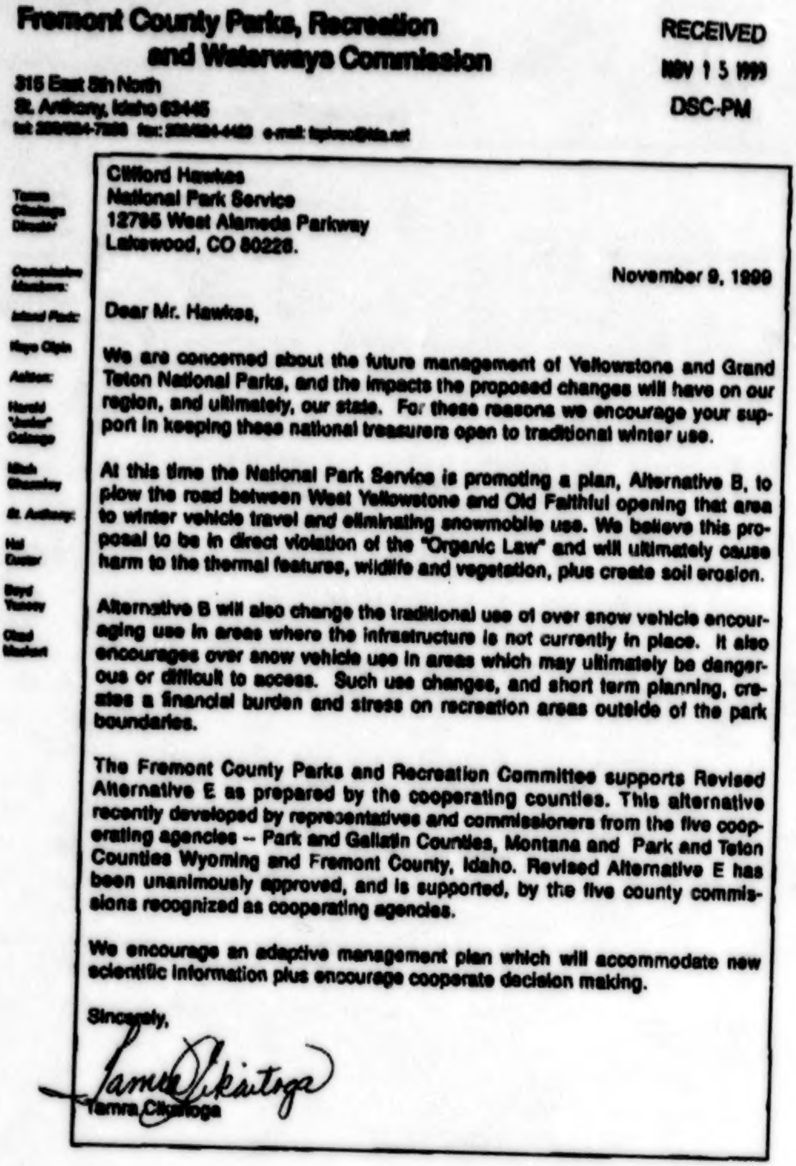
Therefore, the identification of a preferred alternative in a DEIS should be regarded by the public as extremely tenuous. This is because an EIS is to serve as a means of assessing impacts of proposed agency actions "rather than justifying decisions already made" (§1502.2(g)). The FEIS preferred alternative may be viewed more as a "precursor" decision, which will only become final in a Record of Decision that expresses the rationale for the choice. In any case, it is clear that merely the expression of a preferred alternative, by itself, can in no way invalidate the entire EIS analysis. The decision-maker can select any of the alternatives in a Final EIS through consideration of a variety of factors, including but not limited to environmental impacts. Regarding the air quality study: criticism stemming from the release of the summary ARD report and its content is beyond the scope of this EIS analysis and requires no response. The report, so far as the alleged faulty information, was not a part of the Draft EIS or the EIS process.

Page 1. Re: Need to use "Scientific" data and "Significant" impacts in the analysis. First, no decision has yet been made therefore it is not ripe to question whether or not a decision was "informed." Second, the cooperating agencies cannot be a party to making the decision. That responsibility lies exclusively with NPS.

The EIS analysis is aimed at developing a programmatic plan (§1508.18(b)(2) and (3)) for winter use. For concerns relating to "science", it should be noted that there is no burden to develop site specific information to support a programmatic planning document. Without further information, we are unable to address inferences about use of "sound science." An EIS is not, per se, a scientific analysis. It is intended to disclose environmental effects over a range of alternatives, in which the analyses must demonstrate scientific integrity by disclosing methods and making explicit references to sources used (40 CFR 1502.24). The DEIS does this. CEQ regulations also allow for incomplete or unavailable information, by describing procedures that are to be following in these instances (§1502.22). Any identified gaps in the FEIS will follow the requisite procedures. Also, there is no requirement in CEQ regulations (§1502.14) to justify a preferred alternative. The requirement is to identify one or more alternatives as preferred in the DEIS if there is a preference. The agency must express a preferred alternative in a Final EIS.

Page 1. Re: Support for Revised Alternative E proposed by counties and State of Wyoming. Revised Alternative E comes from cooperating agencies and the Blue Ribbon Coalition in a variety of forms. The essentials of Revised Alternative E, all versions considered, are not significantly different from alternative E as presented in the DEIS, especially considering the programmatic nature of the proposed action. See the matrix comparison of Revised E versus the features analyzed in the range of alternatives. In general, the tenor of these expressions of support and opposition appear to relate to the decision that the commenter would like to see NPS make. The commenter's opinions will be considered in making the final decision, but there is nothing in those opinions that substantively would alter the range of alternative features to be evaluated in the Final EIS.

Page 2. Re: Air Resources Division air quality study: criticism stemming from the release of the summary ARD report and its content is beyond the scope of this EIS analysis and requires no response. The report, so far as the alleged faulty information, was not a part of the Draft EIS or the EIS process.
Page 2. Re: Wyoming DEQ should have been included on the interagency team. As a matter of fact, Wyoming DEQ personnel have been involved since before the EIS was undertaken in planning and implementation of air studies in YNP, along with the State of Montana. Montana DEQ people have been actively involved in the EIS process. The agreement NPS signed with the State of Wyoming indicates that Wyoming DEQ similarly has special expertise and will provide information on impacts to air and water quality. Unlike Montana, that department was not actively involved and no input was received from them prior to publishing the DEIS. DEQ involvement was limited to criticism of the DEIS in the State's comment letter. NPS is responding to that criticism elsewhere. Re: Wyoming primacy. Wyoming does not have primacy over NPS managed lands. Wyoming is the regulatory authority for some aspects of the Clean Air Act, delegated to it by US EPA. Given the documented impacts on air quality from snowmobiles, it would seem that DEQ might be interested in the possible levels of pollution from the standpoint of NAAQS standards relating to human health, especially in a national park in Wyoming. DEQ has had opportunities to be involved in the dialogue along these lines. Despite the regulatory aspects of air quality, the commenter should note that the federal land manager, NPS in this case, has explicit authority over resources and their management on public lands in their jurisdiction. This includes air and air quality related values. NPS has the assertive responsibility under the CAA to protect air quality (and related values) in Class I airsheds. It has the authority to undertake management actions intended to meet that need, as an entirely separate issue from NAAQS standards and state regulatory processes.
Page 2. Re: DEQ offer of participation. The state claimed special expertise in air and water quality and agreed to provide that expertise as a cooperating agency. It would be incumbent on the state to fund any such efforts within the purview of the agreement (§1501.6(b)(5)). NPS would welcome Wyoming DEQ's participation in future air quality studies.



Fremont County Parks, Recreation and Waterways Commission
315 East 5th North
St. Anthony, Idaho 83445
tel: [illegible] fax: [illegible] e-mail: [illegible]

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Tamra Cikaitoga
Director

Commission Members:

Island Park:

Kaye Olpin

Ashton:

Harold "Junior" Calonge

Mitch Chumley

St. Anthony:

Hal Dexter

Boyd Yancey

Chad Madsen

Clifford Hawkes
National Park Service
12795 West Alameda Parkway
Lakewood, CO 80228.

November 9, 1999

Dear Mr. Hawkes,

We are concerned about the future management of Yellowstone and Grand Teton National Parks, and the impacts the proposed changes will have on our region, and ultimately, our state. For these reasons we encourage your support in keeping these national treasurers open to traditional winter use.

At this time the National Park Service is promoting a plan, Alternative B, to plow the road between West Yellowstone and Old Faithful opening that area to winter vehicle travel and eliminating snowmobile use. We believe this proposal to be in direct violation of the "Organic Law" and will ultimately cause harm to the thermal features, wildlife and vegetation, plus create soil erosion.

Alternative B will also change the traditional use of over snow vehicle encouraging use in areas where the infrastructure is not currently in place. It also encourages over snow vehicle use in areas which may ultimately be dangerous or difficult to access. Such use changes, and short term planning, creates a financial burden and stress on recreation areas outside of the park boundaries.

The Fremont County Parks and Recreation Committee supports Revised Alternative E as prepared by the cooperating counties. This alternative recently developed by representatives and commissioners from the five cooperating agencies -- Park and Gallatin Counties, Montana and Park and Teton Counties Wyoming and Fremont County, Idaho. Revised Alternative E has been unanimously approved, and is supported, by the five county commissions recognized as cooperating agencies.

We encourage an adaptive management plan which will accommodate new scientific information plus encourage cooperate decision making.

Sincerely,

Tamra Cikaitoga

Tamra Cikaitoga

Page 1. Re: Direct violation of the "Organic Law". The NPS and its basic mandate are authorized under the NPS Organic Act (16 USC 1,2-4) and the General Authorities Act (16 USC 1a through 1a-8):

"The Service thus established shall promote and regulate the use of the Federal areas known as National Parks...by such means and measures as to conform to the fundamental purposes of the said Parks...which purpose is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

An EIS is necessary to evaluate alternative choices for plans while revealing the possible environmental impacts of activities that may be included in the plan. All alternatives presented in the EIS meet the purpose and need for action. The purpose and need for action in an environmental impact statement (EIS) is a brief statement specifying the underlying purpose and need to which the agency is responding in proposing the alternatives, including the proposed action. The need to develop a plan through an EIS is indicated by the difference between overall desired condition and the conditions that presently exist. The desired condition reflects the parks' mandates, and is articulated in the EIS as series of general objectives. The final plan will be designed to move the existing condition toward the desired condition.

The effects of all the alternative actions on natural resources, public health and safety, socioeconomics, adjacent lands and visitor access and experience are analyzed in the EIS, Chapter IV, Environmental Consequences.

Page 1. Re: Support for revised alternative E. Comments place a great deal of emphasis on support or justification for a course of action or decision. Under the CEQ regulations, the requirement in an EIS is to provide a range of reasonable alternatives that clearly define the issues, and to fully evaluate and disclose the possible effects of those alternatives. The DEIS meets this requirement. Comments of support or nonsupport go to the decision to be made; they do not affect the range of alternatives considered.

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June 30, 1999

Clifford Hawkes, Job Captain
Planning and Design Services
Denver Service Center
National Park Service
12795 West Alameda Parkway
Lakewood, CO 80228

Dear National Park Service:

Thank you for the opportunity to comment on the draft Winter Use Plan for Yellowstone Park. Given the seven-day timeframe for comments on a 500-plus-page document, we will limit our concerns to the information and analysis as they relate to the proposed action and, specifically, the plowing of the road from West Yellowstone to Old Faithful.

Generally, we do not find that the analysis and information that you use supports the preferred alternative. We base our concerns on inconsistencies between your statement of desired conditions, the data you provide, the criteria developed by the Park Service and a departure from the criteria developed at Idaho Falls in October 1998. We question your analysis of supporting data and information (or lack thereof) in the following areas:

(1) Socio-economics;
(2) Visitor experience;
(3) Quiet;
(4) Wildlife;
(5) Air and Water Quality; and
(6) Park infrastructure.

We use your own information provided in the document to entreat you to select a different proposed action.

(1) Socio-economics

The neighboring communities near Yellowstone Park provide many essential services to winter visitors. Gallatin County conducted a socio-economic survey of over 1,100 businesses in Bozeman, West Yellowstone and Big Sky in May 1999. We received responses from approximately 28% of those businesses. Lost sales to those businesses alone, if Yellowstone National Park winter visitations were to be prohibited, would total $16,763,297. Total winter payroll of those businesses who responded is $15,741,552.

As stated in your report, p. 74, "The indirect, and induced expenditures generated in the GYA by nonresidents visiting the parks in the winter months are estimated to be approximately $60,000,000." This figure represents a huge economic impact to the communities surrounding the park.

We cite p. 264 of your draft to highlight this impact:

> *"A loss of the regional expenditures by these nonresidents would lead to an overall reduction of $14,700,000 in total economic output and 357 jobs in the 3-state area."*

We strongly disagree with your summation that this is a "negligible negative impact." On the same page you state, "The main reason that visitors make the often long and expensive trip to see YNP, however, is not to dine in West Yellowstone or spend a night in a motel in Gardiner." The question we put to you is this: How many of the thousands of YNP visitors would come and enjoy the park if these services were not provided and available in West Yellowstone and Gardiner? According to our survey, close to 34,000 of those who do business in Gallatin County are winter visitors to Yellowstone Park. Many of these visitors are able to plan a winter vacation in Yellowstone because they know that necessary services are available in West Yellowstone.

We dispute the draft's analysis of the regional economy on pages 480 and 481, under "Unavoidable Adverse Impacts." You state on page 480 that:

> *"[n]one of these above impacts could be considered irreversible or long-term in the context of total economy .... [I]t is the nature of business to start or to change course based on economic self-interest or survival."*

Tell that to the hundreds of businessmen and women who make their living by providing a snowmachine winter experience to park visitors. Whoever wrote this has no sensitivity to business concerns. As other alternatives are available that could avoid this adverse impact, your conclusion is absurd.

(2) Visitor Experience

When the National Parks system was instituted, one of the paramount reasons was to preserve natural treasures in the United States, for present and future generations to experience and appreciate. These visitors, as well as all Americans, have paid for these treasures to be preserved for many years, and deserve the utmost consideration when considering the future of Yellowstone.

You state on page 185:

> *"A 1998-99 survey of Yellowstone winter visitors found support for sound and emission standards on snowmachines, more information and interpretation, stricter enforcement of rules, and more trails and locations for recreation. Closing roads to oversnow vehicles, restricting groomed roads to snowcoaches, and plowing the road from West Yellowstone to Old Faithful gathered the least support among respondents* [emphasis added]. *"*

The majority of winter visitors have told you that your preferred alternative is the one that they, the users and supporters of the park, prefer the least! In your words, they have shown "*a consistent picture of very low support … for the major management change contained in alternative B: plowing the road from West Yellowstone to Old Faithful.*" Draft Winter Use Plan/EIS, p. 266.

The winter visitors' primary reasons for traveling to Yellowstone are obviously not being taken into account under Alternative B. As stated in your draft plan on p. 191, "The most important qualities to visitors to the park are scenery, wildlife, and clean air." How much passing scenery can a park visitor traveling by shuttle bus enjoy, when there are 20 ft. berms of plowed snow on either side of the road? How much wildlife can the visitors observe in their natural state, when the park's animals will be avoidant of the sound, sight and smell of tour buses traveling down a plowed road with high berms of snow on either side? Nearly all visitors you surveyed "*stated their support for oversnow mechanized access, as opposed to plowed roads or mass transit ….*" Draft Winter Use Plan/EIS, p. 193. As we previously stated, fewer winter visitors surveyed stated a willingness to pay for winter car and bus access to Old Faithful, than the cost of paying for clean, quiet snowmobiles. Draft Plan, pp. 267-68.

You state that Alternative B is attractive because it provides an affordable opportunity for winter visitation. You cite the income level and demographics of winter visitors on page 183 (Freimund, et al. 1999) as "wealthy and highly educated." Even if you offered free mass transit based on means testing, how will these lower income people get to the park in the first place? Your analysis must include this.

There are existing, less expensive, or even *free*, alternatives. For example, visitors can choose any border trailhead or boundary to enter the park via snowshoe or cross-country skis.

Your analysis regarding visitor experience under Alternative B gives short thrift to the 1996 Littlejohn survey results listed on page 184, and the 1999 survey (p. 233) where visitor respondents reported "overall support for continued mechanized winter access to YNP." A preferred alternative, based on these surveys, would more accurately reflect visitor preference if it met the following criteria:

(a) Limited winter visitors;
(b) Allowed oversnow machine travel;
(c) Reduced noise and pollution from snowmobiles;
(d) Adopted a reservation system; and
(e) Groomed more frequently.

Preferences for car access, affordability and plowed roads were not mentioned in this survey.

Your analysis observes that scenery and wildlife viewing would be lessened along the plowed road from West Yellowstone to Old Faithful under the preferred alternative. Your conclusion on page 303 states as follows:

> "*…[T]he preferred alternative will eliminate or detract from multiple critical characteristics of the desired winter experience for a large number of participants …[and] plowing the road from West entrance to Old Faithful*

Clifford Hawkes, Job Captain
National Park Service
June 30, 1999
Page 4

> *would create berms of snow that would detract from scenery viewing opportunities for many visitors."*

Again, we question how your own analysis supports your preferred action.

(3) Quiet

We observed certain themes in your document; one being a lack of analysis and data where such information might not support your preferred alternative. In the area of "quiet," we found no information related to the decibels associated with shuttle buses, snowplows, and individual vehicles that would be permitted under Alternative B. We found no comparative analysis of the noise given off by these proposed activities along the corridor from West Yellowstone to Old Faithful with the present activities permitted. Further, we saw no analysis of the same activities compared to those noise levels of "clean green" snow machines. As we understood at Idaho Falls and read in this draft, "clean green" machines were proposed to be an action common to all alternatives.

We cite your 1999 winter visitor survey, which showed a willingness on the part of winter visitors to pay $45 more for clean, quiet machines. We also quote Freimund et al., 1999, from p. 185 of your draft:

> *"A 1998-1999 survey of Yellowstone visitors found support for sound and emission standards on snowmachines, more information and interpretation, stricter enforcement of rules, and more trails and locations for recreation. Closing roads to oversnow vehicles, restricting groomed roads to snowcoaches, and plowing the road from West Yellowstone to Old Faithful gathered the least support among respondents."*

Again, on page 232, the first paragraph on "Natural Quiet" demonstrates no mention of the noise levels generated by mass transit buses, plows or individual vehicles under Alternative B. The same is true for your sound analyses on page 306, Table 46 and page 200, Table 35. Your conclusion on page 307 again ignores the sound levels produced by the proposed activities of Alternative B.

(4) Wildlife

In our opinion, it is imperative that a Winter Use Plan meet the requirement for the preservation of wildlife. The information regarding wildlife in your Draft Winter Use Plan sheds light on the various impacts your proposed Alternative B would have on winter habitat, foraging patterns, and mortality rates of wildlife. Your map entitled "Winter Wildlife Habitat" clearly illustrates that the geothermal areas located near the road between West Yellowstone and Old Faithful are prime wintering areas for much of the park's wildlife. On page 128, you state that "ungulates can be displaced from wintering habitats near roads and facilities. This includes elk, moose, and big horn sheep." On page 129, you state that the lynx, wolverine, Fisher, marten, bobcat, river otter, red fox, and coyote have low population densities in the park and are vulnerable to human use of the park, especially during the winter. On page 135, you cite the vulnerability of the bald eagle to human activities from developments and motorized travel, as well as the high potential for "vehicle/ eagle collisions ... because eagles are known to forage on road-kill carcasses." As you noted, the severity of Yellowstone winters, coupled with depleted energy levels, low food supply, and the interruption of patterns of movement (by high berms of snow, traffic, and plowing and grooming operations), add up to significant "costs" to wildlife. In several instances throughout your draft plan, you list the possibility of vehicle/wildlife collisions as a major factor in wildlife mortality.

"Chronic harassment in cold weather can result in reduced reproductive rates and may significantly increase mortality [of wildlife]." Draft Winter Use Plan, p. 123. Those visitors surveyed cited that their first reason for winter visitation of the park was to view wildlife. If the number one reason the majority of winter visitors surveyed state that they come to Yellowstone to view wildlife, does that not lead to a greater potential for "chronic harassment," intentional or unintentional? Will animals pay the cost of bus and vehicle travelers' desire to see wintering wildlife? Will wildlife be forced to travel greater distances for food and water, to accommodate plowed roads? Will they be driven to other areas to survive, in order to avoid winter park visitors who are not familiar with their needs and habits?

These are all important questions which need to be addressed, when considering the needs of some of the park's most precious resources. They will, in the end, rely on us to ensure that their environment is protected to the utmost of our human ability.

(5) Air and Water Quality

We again observed the lack of analysis and data to support the proposed activities from West Yellowstone to Old Faithful under Alternative B. Again, you failed to compare air quality impacts where "clean green" machines are required, to the proposed activities.

We cite from p. 80 of your draft as follows:

> *"...The most commonly raised air-quality related health concerns in the GYA are tied to smoke and vehicle emissions [emphasis added]. Air pollutants called particulate matter include dust, dirt, soot, smoke and liquid droplets directly emitted into the air by sources such as power plants, vehicles, construction activity, fires and natural windblown dust."*

On page 481 of your draft document, you state that all alternatives present the potential for impacts, including those on air quality, which are "short-term (for the duration of the causal factor) and minor." You have provided no science to support your claim that these potential impacts are either short-term or minor.

You also state on page 481 that a "definitive cumulative impact analysis would be conducted later when site-specific proposals are made and site-specific effects are determined." Your preferred Alternative B is nothing but "site specific"! Your logic evades us.

On page 235 of your draft, you discuss the impacts of snowmobile emissions on air quality in the park. On that same page, you omit data on the negative impacts of a potential increase in tour bus and vehicle emissions in the area between the West Entrance and Old Faithful. Nor do you discuss the potential, positive impacts that "clean, green" snowmobiles would pose in this equation. This is a notable omission.

Clifford Hawkes, Job Captain
National Park Service
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Page 6

You stated on page 79 that winter visitors were more inclined to pay for clean and quiet snowmobiles ($45 more than current cost) than they would pay for plowing the road from West Yellowstone to Old Faithful, and for bus and vehicle usage of that road in the winter ($5 more than current cost). Above all, we remind you of your statement on page 191: "The most important qualities to visitors to all three areas were scenery, wildlife, and clean air [emphasis added]."

In regard to water quality, plowing the road from West Yellowstone to Old Faithful, and allowing buses and vehicles to travel that road during the wintertime will most definitely negatively affect the water quality in the park, based on your own premise, as stated on page 94:

> *"[H]ydrocarbon pollution in water will initially persist on the surface and eventually settle in the water column, exposing fish and invertebrate populations."*

When the huge berms of snow created by the plowing of the Old Faithful road melt, along with all of the deposited pollution from buses and cars, where will that snow go? Into the park's watershed. Your study of impacts on water quality needs to be expanded to include pollution potential presented by buses and vehicles during the winter.

(6) Infrastructure

At Idaho Falls in October, the cooperating agencies were instructed to consider the impacts to the park's infrastructure when formulating alternatives. We find little or no analysis of the impacts to the park's infrastructure regarding the preferred alternative. Specifically, we can find no costs for plowing the road from the West entrance to Old Faithful; no costs associated with the plowing impact on the condition of the road surface; and no costs associated with policing, emergency, accident response, delivery services and garbage hauling, to name a few.

We believe in maintaining park improvements at a minimum to ensure a pristine, wilderness park setting. If the park insists on building more beds, expanding sewage treatment facilities and providing overall more infrastructure to serve an ever-growing number of park visitors, it will fail to achieve its mandate. Rather, the park should increase its dependence on adjoining communities to provide those services, improvements, beds and infrastructure. The preferred alternative, in absence of data and analysis to demonstrate otherwise, will adversely impact the park's infrastructure.

We cite your conclusion on page 297:

> *"...There could be long-term adverse effects if the demand for available access to Old Faithful exceeds the capacity for parking at that location. Although oversnow use would be eliminated between West Yellowstone and Old Faithful, the introduction of alternative modes of transportation would surpass the level of access currently realized through existing transportation modes."*

Your analysis on page 296 goes into detail on the parking requirements for the preferred alternative. It fails to mention day use facilities, sewage treatment, and medical and police services. We cite page 483, where you state:

> *"Under Alternative B, there may be increased impacts to the Old Faithful area if winter pedestrian use increases due to enhanced access for this type of visitor."*

You also briefly address lodging facilities on page 164:

> *"Most of these [beds] are not open during the winter months because of infrastructure vulnerability to freezing temperatures. The facilities were originally constructed in the 1930's and were never intended for winter use."*

Clearly, increased winter use at Old Faithful will require extensive and costly improvements to existing infrastructure.

Finally, under "The Desired Condition" section, p. 5, the draft states:

> *"Further, these desired conditions should be facilitated by cooperative work between the National Park Service, other agencies, local and regional governments, communities, concessions, commercial operations, and the equipment manufacturing industry."*

Gallatin County challenges the Park Service to demonstrate how that statement can be consistent with the preferred alternative.

CONCLUSION

As a cooperating agency, Gallatin County fervently desires to protect Yellowstone National Park consistent with its legal mandate. Far from reacting as a self-serving entity wishing only to further the economic interests of our constituents, we firmly believe in protecting the air and water quality; the wildlife viability; and the diversity of visitor experience. We also believe that the costs, both environmental and financial, should not be unduly placed on the park.

Plowing the road from West Yellowstone to Old Faithful makes no sense. It will further burden the already strained infrastructure of the Old Faithful area at a huge financial cost. (You provided little data on these costs.) Your own surveys show a huge cost to lost business in West Yellowstone and a lack of support from winter visitors. Your data on visitor experience demonstrates little support for a plowed road. Your wildlife data and analysis appear ambiguous and inconclusive as they relate to the preferred alternative. You consistently failed to provide a comparative analysis between "clean green" machines and the impacts of the proposed activities under Alternative B. In summary, using your own data, we find that Alternative B would detract from the visitor experience, adversely impact wildlife, air and water quality, overtax the park's infrastructure, and greatly harm the economy of the adjacent towns, principally West Yellowstone.

Clifford Hawkes, Job Captain
National Park Service
June 30, 1999
Page 8

You have done a very good job of coming up with close to the worst option imaginable. We leave you with this thought: Envision quotas of quietly humming snowmachines traveling at reduced speeds over snow on the road from West Yellowstone to Old Faithful only during daylight hours. No 12-ft. high berms, no noisy, smelly snowplows, cars or buses, no dangerous plowed corridors to entice or trap wildlife. No multi-thousand throngs milling about Old Faithful all day, all winter, clamoring to use the facilities. Clean air. Clean water. Quiet. A quality, diverse visitor experience, and undisturbed wildlife. This is achievable and desired by your constituents.

Alternative B is not the answer. Several of the other alternatives meet the above desired conditions much better.

Sincerely,

GALLATIN COUNTY COMMISSION

William A. Murdock, Chairman

Phil Olson
Phil Olson, Member

Mitchell
Jennifer Smith Mitchell, Member

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GALLATIN COUNTY, MONTANA *(See also response to Paul Bruce, Representative of Cooperating Counties)*
Page 1. There is no requirement in CEQ regulations (§1502.14) to justify a preferred alternative, just to name one or more alternatives as preferred in the DEIS if there is a preference. The purpose of identifying the preferred alternative is so agencies and the public can understand the lead agency's orientation (§1502.14(e)). The entire comment letter is a criticism of the preferred alternative, and as this comment indicates, the purpose is to convince the NPS to "select a different proposed action." In fact NPS will indicate a new preference in the FEIS, which technically addresses this point. NPS acknowledges the commenter feels there isn't sufficient support for selecting the preferred alternative, and that there is disagreement on the nature and level of impacts. The commenter should note that a final decision has not yet been made in consideration of the full range of alternatives in an FEIS. Comments about the rationale for or against the preferred alternative are given too much weight at the expense of the range of alternatives. The rationale for the preferred alternative does not set the scope of analysis. NEPA (CEQ Regulations) does not make stipulations about the rationale for selecting a preferred alternative in an EIS; in fact there is no requirement for stating the rationale in an EIS. It stipulates that in a final EIS, a preferred alternative must be identified. The statement of preference for one or more alternatives in a draft EIS is discretionary, depending upon whether the agency has a preference at that point (§1502.14(e)). Therefore, the identification of a preferred alternative in a DEIS should be regarded by the public as extremely tenuous. This is because an EIS is to serve as a means of assessing impacts of proposed agency actions "rather than justifying decisions already made" (§1502.2(g)). The FEIS preferred alternative may be viewed more as a "precursor" decision, which will only become final in a Record of Decision that expresses the rationale for the choice. In any case, it is clear that merely the expression of a preferred alternative, by itself, can in no way invalidate the entire EIS analysis. The decision maker can select any of the alternatives in a Final EIS through consideration of a variety of factors, including but not limited to environmental impacts. The bulk of the comments in this letter express why alternative B is not acceptable to the writer, using much of the impacts disclosure in the DEIS. We reiterate the purpose of an EIS – to disclose impacts of the proposed action and alternatives to it. NPS will respond directly to any other comments that refute the analysis in general. Where the County's assessment of impacts disagrees with that of the NPS, both viewpoints will be represented – as in the DEIS. Though the County's strong objection to alternative B may be persuasive in the final decision (see above), there is no information presented in this letter that would alter the essential features of that alternative or remove it from consideration. A final note is that the comments in this letter have been directed at the preliminary draft EIS that was provided to cooperating agencies for comment before publication of the DEIS. The DEIS was adjusted to respond to substantive comments from the cooperators. Therefore, page references in the letter and some of the content does not actually apply to the DEIS.
Page 2. NPS affirms its statement that this impact is negligible, considering the regional economy. The DEIS states on page 198 that a $12.4 million loss in a $12.7 billion economy is negligible, especially as this is a worst-case scenario. It is likely that some visitors would continue to come to the GYA in the winter, and it is likely that others would choose to take advantage of a different type of experience. The DEIS goes on to state that despite the negligible loss in a regional economy, the impact would be felt mostly in small communities surrounding the parks. The same information is conveyed in the DEIS in relation to the 3-state regional economy. NPS is responding to cooperating agencies that feel that the economic analysis on 17 counties dilutes the effects for counties that are most immediately affected. NPS will determine and report on the projected impacts for the 5-county area.

Page 2. In many other respects, the commenter might be appreciative of a dispassionate analysis. The cooperators are nearly unanimous in requesting NPS ignore the emotional content on wildlife, air, water and other "protection" issues and rely instead on "good science." NPS has a more optimistic view about the business community in general and, as stated, feels that it will find ways to adapt and profit from its proximity to public lands. NPS also notes from hearings and other comments that some of that community does not agree with the commission nor support NPS in addressing critical resource issues.
Page 3. Re: Preferred alternative. Partly in response to the overall non-support of plowing the road, NPS expresses a new preferred alternative in the Final EIS. This alternative would provide oversnow motorized access from West Yellowstone to Old Faithful, and allow visitors to experience the park by snowcoach.
Page 3. Re: Alternative B, affordable winter visitation. The stated purpose of plowing the road (DEIS, page 28) is to "improve affordable access." A thorough reading of the EIS would reveal that a required impact topic in an EIS is to evaluate the effects of a proposed action on socially or economically disadvantaged populations (DEIS, page 80). These populations are characterized on page 90 in the DEIS, and the effects on those populations are disclosed in the socioeconomic section for each alternative (DEIS, pp 176, 199, 224, 245, 260, 274, 288). The stated impacts on socially or economically disadvantaged populations are not used as "justification" for plowing in alternative B, although there would certainly be some economic and environmental justice in doing so.
Page 3. Re: Visitor experience. The commenter is encouraged to separate the criteria for selecting an alternative from the process of disclosing impacts for all alternatives. The decision criteria, or factors considered by the decision maker in making his or her choice, will be explained at the time a legal decision is made. Comments arguing about the rationale for the preferred alternative in the DEIS are most applicable to the decision that has yet to be made. Directly to the point of this comment, the new preferred alternative in the FEIS would limit winter visitors, would allow oversnow machine travel, and would eliminate noise and pollution from snowmobiles. Alternative B does the same, except that it would allow snowmobiles in the parks – except from West Yellowstone.
Page 4. Re: Natural quiet. The sound analysis will be more comprehensive for all alternatives in the FEIS.
Page 5. Re: Chronic harassment of wildlife. In part to address the issue of impacts from humans on wildlife, a carrying capacity study for visitor use will be completed in a timely manner after the Record of Decision (regardless of which alternative is decided upon) and the FEIS will set interim visitor use levels. More explanation of the carrying capacity issue will be included in the FEIS.
Page 5. Re: Potential for impacts. Impacts discussed in the section titled Unavoidable Adverse Impacts (DEIS page 317) are drawn from the explanation of assumptions and detailed analysis of alternatives in Chapter IV of the DEIS. NPS feels there is adequate support for the statement in question.
Page 5. Re: Cumulative impact analysis. The EIS and Plan are of a programmatic nature. It has been NPS' expressed intent from the beginning of the process to prepare a programmatic Plan (§1508.18(b)(2) and (3)). This would be the purpose of preparing a "comprehensive EIS." There should have been no illusions that a plan of this magnitude would be based upon detailed, site-specific data in order to make every decision possible relating to winter use. This programmatic approach is acceptable under the law. Such documents make decisions and allocations at a general level and defer many specific project decisions (implementing the plan) to a later date. Some site-specific decisions will require additional NEPA analysis and a new decision that is "tiered" (§1508.28) to, or supported by, the programmatic plan. For these analyses, the assessment of cumulative impacts must be done in accordance with the CEQ regulations.
Page 5. Re: Snowmobile emissions. The emissions analysis will be more comprehensive for all alternatives in the FEIS.
Page 6. Re: Water quality. The analysis of emissions impacts on snowpacks, water quality and aquatic resources will be updated in the FEIS using information not available for the DEIS.
Page 6. Re: Park infrastructure. Costs associated with winter use alternatives may be found in DEIS Appendix F (Vol. II).
Page 6. Re: Park improvements. As the commenter points out, there are impacts associated with the preferred alternative in the DEIS. There are impacts disclosed for all alternatives, as is the nature and purpose of an EIS. The commenter misses the point of the process and confuses the eventual decision with disclosure of impacts through the range of alternatives.

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OCT 28 1999
PLANNING OFFICE

Presentation for October 21, 1999 Public Hearing Regarding Winter Use EIS

My name is Bill Murdock, and I'm a Gallatin County Commissioner, from Bozeman, Montana. Our County borders the northeast corner of Yellowstone National Park. Many of our residents are park users, and we value its resources. On their behalf, thank you for the opportunity to comment on the draft Winter Use Plan for Yellowstone and Grand Teton National Parks and, specifically, for allowing us to participate as a cooperating county in this process.

I've just given to you a copy of our June 30, 1999 letter to the National Park Service, which I request be added to Volume II of your draft EIS, for inclusion with the other responses from Cooperating Counties and Agencies. This letter spells out in detail our concerns related to your preferred Alternative B, according to the following criteria:

(1) Socio-economics;

(2) Visitor experience;

(3) Quiet;

(4) Wildlife;

(5) Air and Water Quality; and

(6) Park infrastructure.

As stated in the Executive Order of February 9, 1972, it's imperative that we protect the resources of these lands, promote the safety of all users, and minimize conflicts among the various users. Today, rather than repeating to you why Gallatin County disagrees with your preferred Alternative B, I'll focus on a revised version of your original "Alternative E," which is a workable solution we can all live with. Mr. Kruse has already explained this alternative to you in detail, and I don't need to repeat it. Because this alternative represents "adaptive planning," it's based on the principle that the process of maintaining the national parks is ongoing, one which will be dealt with here and now and for generations to come, and based on sound data and science. And it's specifically for these future generations, among other reasons, that we support Alternative E, with some modifications.

I'll address why I support this revised alternative based on the six criteria I used to argue against your Alternative B. The concern with ***socio-economic effects, the first criteria,*** is the main reason we were brought into this process to begin with. On page 260 of your draft plan, you outline the socio-economic effects of Alternative E. You state that there are no estimated impacts to the regional economy until "future, unspecified policy changes are implemented," and that any possible policy changes would not take place until scientific data is available upon which to base policy decisions. It is our hope that policy decisions put into place, which will affect not only visitors to the park but the people who make their living near the park, will encompass socio-economic data which can be provided to you in greater detail than what we've been able to give you to date.

In May of 1999, Gallatin County did a survey of businesses regarding the effects of winter park usage. A partial summary of the survey's responses are included in Volume II of your July 1999 Draft Winter Use Plan. I would note that, of the responses we received, the total lost sales to these businesses alone if Yellowstone National Park winter visitations were prohibited would be over $16.7 million annually. We respectfully remind you that many park visitors are able to plan a winter vacation in Yellowstone because they know that necessary services are available in communities like West Yellowstone.

The second criteria is ***"visitor experience."*** Your 1998-99 survey of Yellowstone winter visitors found support for sound and emission standards on snowmachines, more information and interpretation, stricter enforcement of rules, and more trails and locations for recreation. Alternative E would continue scientific studies of the impacts of winter visitor use upon park resources, and if determined by sound scientific evidence, selected areas or road segments would be closed if no other mitigation method was evident. Our Revised Alternative E would require subsequent review of this data by an independent, third party. Any trail or road closure would require a minimum of one year's notice by the Park Service.

Your Alternative E addresses the third criteria, ***"quiet,"*** in a forward-thinking manner. The Advisory Committee formed under this alternative would assist with the development of new sound standards for all oversnow vehicles in the parks. With our suggested modification, the committee would include representatives from cooperating agencies; environmental groups; the National Park Service; federal, state and local governments; and the snowmobile industry. The Committee would utilize the technical expertise of all relevant sources.

Wildlife, our fourth criteria, is one of the top survey answers given when winter park visitors were asked what they value most about Yellowstone. Again, one of the reasons we like Alternative E is because the Advisory Committee would include representatives from the U.S. Fish and Wildlife Service, and State Fish and Game in its adaptive management approach, to determine long-term impacts to wildlife and suggest solutions if necessary.

Our fifth criteria, ***air and water quality***, are critical beyond measure. There's no other place in the world like Yellowstone, and it's up to all of us to maintain it. We know that snowmobiles need to be cleaner and quieter, and park users state their support for this change. We suggest that regulatory measures be adopted immediately if necessary and that, as you stated yourself, Alternative E would "greatly improve water resources" in the park.

At the Livingston meeting, we discussed our final criteria, ***park infrastructure***, and suggested better utilization of existing facilities, to reduce impacts on the park's environmental resources, and to assure a quality visitor experience. We suggest dispersing winter visitor services throughout the park, for example at Canyon and Grants Village, and utilizing the existing infrastructure in the park's gateway communities, such as West Yellowstone.

In summary, I stress again that an ***adaptive approach*** to maintaining the parks is far more healthy and far-sighted than plowing the road to Old Faithful. Two wrongs do not make a right. We realize that the existing state of affairs is not acceptable, and want to build upon your idea of an inclusive, advisory committee which would facilitate long-term solutions for our park.

Thank you for listening.

GALLATIN COUNTY, MONTANA - COMMISSIONER BILL MURDOCK (See also Response to Paul Bryan, Representative of Cooperating Counties)
Re: Reference to letter of June 30, 1999 spelling out concerns relating to Preferred Alternative B. See responses to letter from Gallatin County.

PARK COUNTY COMMISSIONERS
414 East Callender Street, Livingston, MT 59047 Phone (406) 222-4110

Received
NOV 2 4 1999
DSC-RP

November 20, 1999

Clifford Hawkes, Job Captain
Planning and Design Services
Denver Service Center
National Park Service
12795 W. Alameda Parkway
Lakewood, CO 80228

Dear Mr. Hawkes:

Park County would like to comment further on the draft EIS and also on refute for the record, remarks that were made at the public hearing in Livingston on Saturday, October 23, 1999. Some of the remarks made about our survey were untrue and others showed a lack of understanding of American representative government.

The Park County Commissioners are the duly elected representatives of all the residents of Park County. While individuals may not agree on some issues and are entitled to state their disagreements, to say that the Commissioners do not represent them shows a disregard for the elective process.

The survey was designed for businesses in the gateway communities, i.e. Gardiner and Cooke City. Therefore, Ms. Souvigney would not have received one, because her business is located in Livingston. We did not include any Livingston businesses because we were solely trying to determine what the effect, if any, there would be on the gateway communities.

We also take exception to the comment by Ms. Page that the survey was biased, with no explicit examples of any bias. The survey asked several straightforward questions about impacts, if any, on businesses if snowmobiles were banned in Park County. The reason for the no snowmobiles scenario was that we did not receive the draft alternatives from NPS in time to include them in our first survey. When they were received, the survey was again distributed including the alternatives, but given the time frame, response was very poor. We have had the survey analyzed and that analysis is attached for your information.

NPS's process has been flawed from the start. The counties named as cooperating agencies have met every deadline and participated in every workshop and meeting that was held by NPS.

In addition cooperating counties have worked diligently and in good faith to try to meet our obligations. We have been met by resistance on the part of NPS at every turn.

NPS has not met several deadlines that were crucial in our providing them with our socio-economic data. The critical deadline was the alternatives were to be provided us by January 1, 1999 and we would have until March 1, 1999 to analyze them. We received the drafts on April 22, 1999 and the analysis had to be completed by May 24, 1999.

The October 19, 1999 press release stating that the air quality at the Yellowstone's West Gate in West Yellowstone, Montana, is worse than Azusa, California's was not true, and to this point there has been no formal retraction by NPS of that report. It is another example of the spin used by NPS. Sixty second sound bytes rather than facts seem to be the order of the day with Yellowstone Park officials.

Yellowstone Park Officials have violated the Memorandum of Agreement they signed with Park County on November 9, 1998. The MOA states that the lead agency shall "request input and permit adequate time for the response from the cooperating agencies, provide in a timely manner and allow the appropriate cooperating agencies to review analysis relevant to the information provided by that cooperating agency. Share and exchange models, data and other information in their possession now or when developed relating to affected resources and environmental impacts and mitigation relating to the proposed actions and its alternatives in the EIS." All of the above agreements have been violated by NPS. They did not provide the cooperating agencies with adequate time to review alternatives, and they did not share models, data or any other information including the report released on October 19, 1999.

We request that the National Park Service make a concentrated effort to reestablish integrity to the process. NPS should schedule a meeting with all cooperating agencies to resolve issues and repair the damage they have done to the process. NPS should also provide all cooperating agencies with all pertinent information as they agreed in the MOA.

Sincerely,
Park County Commissioners

Dan B. [illegible], Chair

Jim Hunt, Commissioner

Terry [illegible], Commissioner

Park County Yellowstone National Park Winter Use Impact Survey 1999
Number or Surveys Returned: 22

1. What type of business do you operate in the Winter Season?
Responses:

1	Storage Unit
4	Bed & Breakfast/Cabins
1	Retail Store
2	Snowmobile Sales & Service
7	Hotel/Motel/Lodging
1	Propane Sales
1	Restaurant
2	Unknown
1	Pawn Shop
1	Bar/Saloon

14. If Yellowstone National Park prohibited snowmobiles, how would it affect your business?
Responses:

4	No Effect (2 Hotel/Motel; 1 B&B; 1 Restaurant)
1	Layoff employees (Snowmobile Sales/Service)
7	Close business in Winter (2 B&B; 1 each Storage Unit, Hotel/Motel, Retail Store, 2 Unknown)
0	Seek alternative sources of revenue
0	Reduce non-payroll expenses
2	Other (B&B, Hotel/Motel: Advertise more in Paradise Valley)

15. If Yellowstone National Park prohibited snowmobiles, how would if affect your business?
Responses:

3	No Effect (Hotel/Motel; Restaurant; Snowmobile S&S)
1	Layoff employees (Snowmobile S&S)
3	Close business in Winter (Retail Store; B&B; Unknown)
0	Seek alternative sources of revenue
1	Reduce non-payroll expenses (Hotel/Motel)
1	Other (B&B: Advertise more in Paradise Valley)

YNP WINTER USE ECONOMIC IMPACT SURVEY
PARK COUNTY, MT

TOTAL NUMBER OF SURVEYS RETURNED 22

1.	LIST ATTACHED	TYPE OF BUSINESS
2.	169	NUMBER OF PEOPLE YOU EMPLOY DURING THE WINTER SEASON
3.	$2,393,500.00	TOTAL GROSS ANNUAL SALES TO YNP WINTER VISITORS
4.	49.88%	% OF WINTER SALES TO YNP WINTER VISITORS
5.	36.18%	% OF TOTAL SALES TO YNP WINTER VISITORS
6.	14.83%	% OF YNP WINTER VISITOR SALES THAT ARE TO PARK COUNTY RESIDENTS
7.	46.19%	% OF WINTER SEASON CUSTOMERS THAT ARE YNP WINTER VISITORS
8.	34.59%	% OF YOUR TOTAL CUSTOMER BASE THAT ARE YNP WINTER VISITORS
9.	34.58%	% OF YNP CUSTOMERS THAT ARE PARK COUNTY RESIDENTS
10.	10,671	NUMBER OF CUSTOMERS THAT ARE YNP WINTER VISITORS
10A.	762	AVERAGE NUMBER OF CUSTOMERS YNP WINTER VISITORS
11.	11507	TOTAL NUMBER OF CUSTOMERS LOST IF YNP WINTER VISITS PROHIBITED
11A.	677	AVERAGE NUMBER OF CUSTOMERS LOST
12.	$436,030.00	LOST SALES IF YNP WINTER VISITS WERE PROHIBITED
12A.	$24,223.89	AVERAGE LOST SALES
13.	$340,000.00	TOTAL WINTER SEASON PAYROLL
13A.	$20,000.00	AVERAGE WINTER SEASON PAYROLL
16.	25.50	HOW MANY LAYOFFS?
16A.	1.16	AVERAGE NUMBER OF LAYOFFS
17.	$84,700.00	REDUCTION IN PAYROLL DUE TO WINTER LAY OFFS.
17A.	$6,515.38	AVERAGE REDUCTION IN PAYROLL

Cover letter. Re: Flawed NPS process. There is a desire on the part of NPS to cooperate. The effectiveness of the process used in this EIS relative to cooperating agencies is subject to debate, especially given the short time frames. Early on, NPS intended to invite the three states surrounding the parks to participate as cooperating agencies in developing the EIS. NPS believed the states could provide information on impacts to natural resources and local and regional economies. Without consulting with NPS, CEQ opined to a Wyoming Senator that counties also should act as cooperating agencies in this process. Thus NPS was faced with working with seven cooperating agencies, several of which had never before participated in a NEPA process as cooperators. Due to the schedule set by the settlement agreement, NPS had little time to work with cooperating agencies on what was expected of them in that role. This includes disagreements about the nature of special expertise in the NEPA process, and the burden of the cooperator in providing it. As a result, the cooperators often acted as though the relationship was one where the NPS was to provide information to them, instead of the reverse. NPS regrets the way that this relationship has evolved, owing in large part to the short time frame for environmental analysis. NPS notes that Mr. Paul Kruse, designated representative for cooperating counties, states in his letter that the counties provided detailed socio-economic analysis and that NPS ignored the input. This is definitely not the case. It is clear that roles and expectations in the process were, and are, not well understood, despite the cooperating agreements that were negotiated and signed.
Attachment to cover letter, County survey. NPS acknowledges receipt of the survey and will refer to it as appropriate in the FEIS.

2910

BOARD OF COUNTY COMMISSIONERS

Charles W. Johnstone, Chairman
Timothy J. Morrison, Vice Chairman
Tim Wade, Commissioner

PARK COUNTY, WYOMING
Organized 1911

ORIGINAL PARK COUNTY COURTHOUSE
CODY, WYOMING
Completed 1912

Commissioners' Office

December 14, 1999

Clifford Hawkes
National Park Service
12795 West Alameda Parkway
Lakewood, Colorado 80228

RE: Other Studies & Additional Crucial Information

Dear Mr. Hawkes:

On November 30, 1999 the National Park Service extended the December 1, 1999 comment deadline to December 15, 1999 for the *Winter Use Plan Draft Environmental Impact Statement for the Yellowstone and Grand Teton National Parks and John D. Rockefeller, Jr., Memorial Parkway (DEIS)*. This extension provides additional time to analyze the above-referenced document.

The weaknesses the Cooperating Counties identified in our comments filed on December 1, 1999 included the gaps in crucial information for the two parks. In addition, other studies were either in draft or "in press".

Please identify these, other studies or any other relevant new information that will become available during the additional time provided by this extension. We request copies of this information be provided, as soon as it becomes available, so the Cooperating Counties will have the maximum amount of time to analyze the information and, if necessary, to formulate any comments before December 15, 1999.

Thank you.

Sincerely,
BOARD OF COUNTY COMMISSIONERS
PARK COUNTY, WYOMING
Charles W. Johnstone
Charles W. Johnstone, Chairman
Timothy J. Morrison
Timothy J. Morrison, Vice Chairman
Tim Wade
Tim Wade, Commissioner

BOARD OF COUNTY COMMISSIONERS

Charles W. Johnston, Chairman
Timothy J. Morrison, Vice Chairman
Tim Wade, Commissioner

Park County, Wyoming
Organized 1911

Original Park County Courthouse
Cody, Wyoming
Completed 1912

Commissioners' Office

December 14, 1999

Clifford Hawkes
National Park Service
12795 West Alameda Parkway
Lakewood, Colorado 80228

RE: Additional Questions

Dear Mr. Hawkes:

We appreciated the opportunity to review and comment on the *Winter Use Plan Draft Environmental Impact Statement for the Yellowstone and Grand Teton National Parks and John D. Rockefeller, Jr., Memorial Parkway (DEIS)*. We have earlier provided our views as part of the Cooperating Counties' comments filed December 1, 1999.

The timing of the extension and its length has been of no benefit to the Cooperating Counties. Since we were not notified of it until after the close of business the day before comments were due, we went ahead and filed on the original deadline. Similarly, any additional submissions by Cooperating Counties were precluded because of time necessary for the formal approval process required by elected governments.

We do note the May 6, 1999 request for an extension of time by U.S. Senators from three states, Senators Mike Enzi, Conrad Burns, Larry Craig and Mike Crapo, was denied. At that juncture in the process it would have been to everyone's benefit by allowing the Cooperating Counties the opportunity to provide a more thorough analysis of the socio-economic effects on the different alternatives so the National Park Service could have included it in the DEIS. This would have allowed greater public discussion of this central issue.

Michael V. Finley, Supt., Yellowstone National Park
RE: Additional Questions
December 14, 1999
Page Two

As a result, the DEIS leaves a number of unanswered questions. They go to the heart of the document and, when answered, will provide a fuller understanding of its key issues.

We are providing these questions as an attachment and respectfully request they be answered as part of the analysis.

Sincerely,
BOARD OF COUNTY COMMISSIONERS
PARK COUNTY, WYOMING

Charles W Johnstone
Charles W. Johnstone, Chairman

Timothy J Morrison
Timothy J. Morrison, Vice Chairman

T Wade
Tim Wade, Commissioner

Enc: Additional Questions Relating to the Winter Use DEIS Submitted by the Park County Commissioners

Additional Questions
Relating to the Winter Use DEIS
Submitted by the Park County Commissioners

December 14, 1999

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1. Provide supporting data for 330 jobs/$13.750 million loss/$12.7 billion total economic output.

2. What is the current capacity for both housing and lodging for the parks for the winter season? What is the projected trend for each category?

3. What is the total number of full- and part-time employees for the parks?

4. Where do the employees live if they do not stay in the parks? Do you have a breakdown by county?

5. What is the average commute of employees who do not stay in the parks?

6. What is the breakdown of methods of transportation for these employees?

7. How many sewage spills have occurred in the past five years (by year)? What is the volume of each? What mitigation has been conducted?

8. Is there currently any groundwater monitoring being conducted in the parks? Where? What are the historic/current trends?

9. What is the current funding level for air and water monitoring? Are they going up or down?

10. What have the funding requests been for air and water monitoring for the past ten years?

11. How many formal agreements are there for the study and protection of Yellowstone's natural and cultural resources? (See Strategic Plan goal) What parties are these between?

12. What specific mechanisms will be used to "increase by 10% over the 1997 levels, the amount of receipts from park entrance, recreation and other fees"? What was the 1997 level of these revenues?

13. What baseline is used to measure use trends? Has there been any percentage change for each recreational category? i.e., skiing, snowshoe, auto, snowmobile

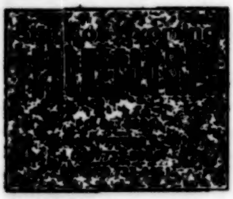
14. How would the preferred alternative encourage handicapped access?

15. What are the effects of the preferred alternative on the surrounding counties' land use plans, policies and controls?

16. What effects would the preferred alternative have on the 24% of private lands of the Greater Yellowstone Area?

Cover letter. Re: Requests for extension and cooperating agency relationships. There is a desire on the part of NPS to cooperate. The effectiveness of the process used in this EIS relative to cooperating agencies is subject to debate, especially given the short time frames. Early on, NPS intended to invite the three states surrounding the parks to participate as cooperating agencies in developing the EIS. NPS believed the states could provide information on impacts to natural resources and local and regional economies. Without consulting with NPS, CEQ opined to a Wyoming Senator that counties also should act as cooperating agencies in this process. Thus, NPS was faced with working with nine cooperating agencies, several of which had never before participated in a NEPA process as cooperators. Due to the schedule set by the settlement agreement, NPS had little time to work with cooperating agencies on what was expected of them in that role. This includes disagreements about the nature of special expertise in the NEPA process, and the burden of the cooperator in providing it. As a result, the cooperators often acted as though the relationship was one where the NPS was to provide information to them, instead of the reverse. It is clear that roles and expectations in the process were, and are, not well understood, despite the cooperating agreements that were negotiated and signed. NPS notes that Mr. Paul Kruse, designated representative for cooperating counties, states in his letter that the counties provided detailed socio-economic analysis and that NPS allegedly ignored the input. All input was considered and included in the document as appropriate.
Attachment to cover letter, 2 pages of questions. A number of the questions that are asked do not appear to be germane to the EIS being written or the decision to be made, although clearly they are of interest to Park County. The commenter does not indicate why or how these questions might affect the key issues or the decision to be made. The EIS and plan is of a programmatic nature dealing with winter use. The alternatives are therefore programmatic – "alternatives for plans which guide or prescribe alternative uses of federal resources, upon which future agency actions will be based." (§1508.18(b)(2)) Considering the nature of the decision to be made, NPS is unclear why information regarding current NPS employment, where employees live, how employees commute, past funding for programs, etc., are important pieces of information. None of these items affect the decision to be made. Questions that have some bearing on the EIS or the NEPA process specific to this action are answered.
Page 1, Question 1. Re: Economic Data. Economic analysis methods and relevant citations may be found on pages 159-161 of the DEIS. All documentation for this analysis is to be found in the planning record for the EIS.
Page 1, Question 2. Re: Housing and lodging capacities. This information is provided on pages 140-141 in the DEIS. Demand trends for housing and lodging are in the purview of the concession planning efforts. NPS is concerned first about the nature of winter recreation impacts on natural resources – this is the limiting factor, not availability of lodging.
Page 1, Questions 3-6. Re: Employee data. As explained above, these questions do not appear to be germane to the issues being evaluated and the decision to be made.
Page 1, Question 7. Re: Sewage spills. Sewage spills occurring in YNP may have affected water quality at specific times and places. NPS asks, how does this affect a programmatic analysis of the types and levels of winter recreation use in the three park units? How should it affect a decision on the types and levels of winter use to be managed? Wastewater facilities and the recognized shortcomings associated with them are the subject of another, separate project outside the scope of a winter use plan.
Page 1, Question 8. Re: Groundwater monitoring. The DEIS does not specifically identify potential impacts on groundwater as a concern. Hence, this is not evaluated. Of greater concern is the amount of emission and leaked substances deposited in the snowpack for direct infusion into runoff and surface water systems. Data collected over time on immediate impacts to surface water and associated aquatic values may or may not lead to concern about groundwater resources.

Page 1, Questions 9-10. Re: Air and water monitoring. Current, past and future funding for monitoring does not appear to be an issue germane to the analysis. Certainly the need to monitor such resources must be a topic discussed in the record of decision (§1505.2(c)). The decision represents a commitment to perform any necessary monitoring and mitigation of disclosed impacts, as well as a firm basis for future funding requests. It may be inferred that, given a decision, if funding is not received to implement monitoring or mitigation associated with the decision then the source of the impact should be discontinued.
Page 1, Question 11. Re: Formal agreements for the study and protection of Yellowstone's natural and cultural resources. This question is much broader than the issues evaluated in the winter use EIS. NPS is unclear about how this information relates to the analysis or the decision to be made. The information requested could be obtained through other sources, but again, NPS concludes this is not relevant to the analysis at hand.
Page 2, Question 12. Re: Park revenues. NPS cannot determine the context for this question or how it relates to the decision to be made.
Page 2, Question 13. Re: Visitor use. Winter visitor use statistics are presented in the DEIS on pages 143-149. NPS is uncertain about the commenter's use of the word "baseline", and what information is really being asked for. The DEIS provides annual data for the various uses since the winter of 1992-3 to illustrate the amount of use received and the latest trends in use. It is the current use, or the current average use that represents the baseline for analysis in the DEIS – i.e. alternative A, the no action alternative. How current use levels might be affected is the subject for impact analysis in each of the other alternatives.
Page 2, Question 14. Re: Disabled access. It is clear that the law requires reasonable efforts be made to allow for accessibility. The commenter appears to infer, as in other comment letters, that access via snowmobile is somehow more disabled user friendly than buses or snowcoaches might be. NPS disagrees with this assessment, and feels that the DEIS alternative B places no more of a burden on disabled users than presently exists. NPS envisions that for many potential disabled visitors, mass transit access is far more viable than that offered by snowmobile.
Page 2, Question 15. Re: Effects of preferred alternative on the surrounding counties. NPS had hoped to receive this information from Park County, and from the other cooperating agencies as a function of the agreement signed by all parties. Park County agreed in writing to provide this information – see cooperating agency agreement, Section VI, Cooperating Agency Responsibilities, subpart d): "Providing to the lead agency documented information on possible conflicts between the EIS' proposed and alternative actions and the objectives of current approved land use plans, policies and controls within the cooperating agency's jurisdiction." NPS will include such information in the FEIS should it be forthcoming.
Page 2, Question 16. Re: Effects of preferred alternative on surrounding private lands. Private lands would seem to be in the jurisdiction of States and Counties. Therefore, as in the previous question, any impacts on private lands might more appropriately be identified within the special expertise and jurisdiction of those government entities. Since there were no issues identified during scoping and no potential impacts identified by either the park service, the cooperating agencies, or the general public relative to private lands and winter use, there is nothing to disclose in this area. The FEIS shall state this, in the absence of additional information.



Commissioners

Ann Stephenson, Chair
Bill Paddleford, Vice-Chair
Sandy Shuptrine
Bob [illegible]
[illegible] Coonce

November 25, 1999

Mr. Clifford Hawkes
12795 West Alameda Parkway
Lakewood, Colorado 80228

Dear Mr. Hawkes:

Thank you for the opportunity to comment on the Winter Use Plan/Draft Environmental Impact Statement for Yellowstone and Grand Teton National Parks. At this time, we do not intend to provide detailed comments on the adequacy of the document, since we provided those comments to you during the internal review.

We wish to emphasize again that Teton County appreciates the opportunity to be a cooperator on this important planning effort and will continue to provide comments and information in the spirit of working together to provide for protection of the resources and visitor use.

Our review of the Alternatives presented in the document leads us to being unable to support any of the alternatives as currently packaged. There are selected elements in several of the alternatives that we can support. We worked with the other counties in developing revised Alternative E, which for the most part packages those elements we can support into one Alternative. As a Board we endorse Revised Alternative E as presented by the Cooperating Agencies. However, we would like to suggest some additional comments.

We support the proposal of creating an advisory committee and feel that this would be a good mechanism for keeping the stakeholders actively involved in a constructive manner. While the entire Board supported the creation of the Advisory Committee, there was not unanimous support from the Board on the specific language outlined in Revised Alternative E which stated that the Advisory Committee would implement EPA mobile emission standards. Some of our Board members are uncomfortable with the term "implement" and feel it is the role of the Advisory Committee to suggest actions and the role of the Park Service to determine how to implement those actions. The Board also feels that as new information and standards become available that they should be implemented as soon as is reasonably possible. We also feel that there should be consistency between all the National Parks in the region. If emission and sound requirements are required in one park, it should be required in all three.

The entire Board supports the requirement of the sale of Bio-Base Fuels by the 2001-2002 winter season as described in Revised Alternative E. However, the Board feels that this requirement does not go far enough and should include a provision for requiring any other cleaner alternative fuels such as natural gas or electricity as the technology develops and is proven.

All five members of the Teton County Board of Commissioners feel that plowing the road from West Yellowstone to Old Faithful is not a good idea. The Board does not feel that plowing this section of road would achieve the objectives of providing safe, affordable access while protecting natural resources. We also feel that this action would cause significant adverse impacts to several surrounding communities that were not adequately discussed in the DEIS. Specifically, we feel there was not adequate analysis of the potential impacts to Teton County (from increased use of the South Entrance) or cumulative impacts to U.S. Forest Service land that would likely see greater use due to this action. Safety concerns from driving this plowed section of road such as low visibility, driving in a snow tunnel or from routine road maintenance were also not discussed. While the Board feels that routine plowing of additional road accesses in Yellowstone should be prohibited as described in revised Alternative E, we feel that if unusual circumstances arise such as lack of sufficient snow for oversnow vehicles due to warm and/or dry conditions than plowing may occur to allow visitor access.

The Board unanimously supports development of a carrying capacity for winter use. We feel that implementing an interim carrying capacity as described in revised Alternative E is essential while the Park Service undertakes scientific studies to determine an appropriate cap. However, we feel that there should be a specific time frame outlined in the FEIS that requires these studies to be completed.

While we overwhelmingly support the continuation of additional science, research and monitoring to ensure that the natural resources and visitor experience are not degraded, as a board we did not unanimously support the requirement for a third party review or review by the National Academy of Sciences as outlined in revised Alternative E. Some of our Board members were not comfortable with this requirement and felt that it may lengthen the review and implementation process. The Board feels that the Park Service should be responsible to ensuring that science, research or monitoring be based on sound scientific measures, be accurate and have adequate peer review as is standard practice in the scientific community.

Teton County is currently in the process of developing a transportation plan for the community. This plan addresses both roads as well as alternative modes of transportation such as pathways and mass transit. Revised Alternative E discusses the provision of providing skier shuttles in Yellowstone National Park. Teton County would like to ensure that the FEIS discusses future transit coordination that includes alternative transportation options in Grand Teton National Park that meets the goals of both the National Park Service as well as the Teton County Transportation Plan.

Finally, the Board feels that no alternative proposed adequately addresses groomed nordic skiing options in Grand Teton National Park. While there is an alternative that proposes grooming ski trails in the Gros Ventre Campground and Two Ocean Lake road, that proposal makes little sense to us from a visitor use and experience standpoint. We suggest that grooming the Teton Park Road as well as a route from Teton Village to the Taggert Lake Trailhead be analyzed in the FEIS.

We hope to continue to work with the Park Service as you move forward in developing a Final Environmental Impact Statement. Please contact Bill Paddleford if you need any additional information or review from Teton County.

Sincerely,

Bill Paddleford

TETON COUNTY, WYOMING
Page 1. Re: Teton county does not support any alternatives as currently packaged. NPS takes this opportunity to address the complexity of alternative formulation in this effort. Many suggestions for alternatives or alternative features were made in the thousands of comments received. A great deal of criticism was leveled at the current range of alternatives because people did not like the way features were "mixed." At the same time, many people focused on features of alternatives that they liked, and features to which they were opposed. It is clear that for such complex issues there could be an infinite number of possible alternatives. CEQ states that in such instances, the agency need only consider a reasonable number of examples that cover the full spectrum of possible alternatives that meet the purpose and need (Question 1b, CEQ 40 Most-Asked Questions). What constitutes a reasonable range depends on the nature of the proposal and the facts in each case, where the proposal is at the discretion of the agency. The final selected alternative that is to be documented in a record of decision may mix features from the range of alternatives evaluated in the final EIS. Such mixing can occur as long as the mixed features are consistent with one another, and as long as the features and their effects would not fall outside the range of alternatives disclosed in the EIS (§1505.1(e)). A finding as to that circumstance would be entirely appropriate in the record of decision, along with the rationale, should the selected alternative not precisely correspond with one of the "mixes" evaluated in detail. This material will be explained in a new FEIS section on the decision to be made.
Page 1. Re: Support for Revised Alternative E. Revised Alternative E comes from cooperating agencies and the Blue Ribbon Coalition in a variety of forms. The essentials of Revised Alternative E, all versions considered, are not significantly different from alternative E as presented in the DEIS, especially considering the programmatic nature of the proposed action. See the matrix comparison of Revised Alternative E versus the features analyzed in the range of alternatives. All alternatives in the DEIS meet the purpose and need for action to a greater or lesser degree.
Page 1. Re: Support creating an advisory committee. NPS appreciates expressions of support for various alternative features, as well as legitimate criticisms. Generally, expressions of support or objection will not be responded to by changes in alternative features. They will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision. People who commented in this fashion are asked to consider that there is a very clear separation between alternatives legitimately considered in an analysis and the expression of a preferred alternative or the decision to be made.
Page 2. Re: Consistency between regional National Parks. NPS agrees with the need for consistent management. Essentially, this is the purpose for performing a joint EIS with integrated alternatives. If management practices differ between the 3 park units as a result of the decision, it is incumbent on NPS to provide sufficient rationale for the difference.
Page 2. Re: Bio-based fuel requirement not enough. NPS agrees that, regardless of the eventual decision, any allowable motorized use (including administrative use) should incorporate the "cleanest" technologies and fuel sources. Appropriate provisions are built into the alternatives for such direction.
Page 2. Re: Against plowing road from West Yellowstone to Old Faithful. NPS appreciates expressions of support for various alternative features, as well as legitimate criticisms. Generally, expressions of support or objection will not be responded to by changes in alternative features. They will be responded to when the decision criteria are developed, and accordingly, when the rationale for the eventual decision is presented in the Record of Decision.
Pages 2-3. Re: Not adequate analysis of Teton County Impacts. NPS is and has been open to information about the effects of all alternatives on adjacent lands. The impacts mentioned in this comment, i.e. potential increased use of YNP south entrance and impacts to national forest lands, are disclosed and discussed in the DEIS for all alternatives. NPS feels the discussions are sufficient, but would welcome any further specific statements of impact provided by the cooperating agencies.

TETON COUNTY, WYOMING
Page 3. Re: Safety concerns about the plowed road section in alternative B. NPS is aware of inherent risks associated with winter driving either on plowed or groomed routes. This rationale would apply to every road or groomed route in the GYA. Safety concerns and potential impacts of alternative B are discussed on page 203 of the DEIS. NPS disagrees that plowed road access from West Yellowstone to Old Faithful would result in a snow tunnel. There would be sections having relatively high berms, but in our judgment there would be no significant difference from a visual and safety standpoint between this road segment and the road between Colter Bay and Flagg Ranch. What makes the Colter to Flagg hazardous in this context is the co-location of the road and the CDST. The latter situation is addressed in different (alternative) ways – construct a separate route (alternative B), widen the highway corridor (alternatives C and D), do not plow north of Colter and put the CDST on the groomed road (alternative E), provide a CDST shuttle service to Flagg (alternatives E/F), and remove both vehicular and snowmobile traffic in favor of oversnow mass transit from Colter Bay (alternative G). Similar options are presented for the West Yellowstone to Old Faithful route across the range of alternatives, all of which are analyzed from the standpoint of safety.
Page 3. Re: NPS should be responsible for ensuring science is accurate. Recreation carrying capacity studies would be implemented under any alternative. The FEIS will reflect interim carrying capacities in some alternatives to mitigate the identified impacts. Most alternatives indicate when implementation would occur. It can be assumed that implementation includes the setting of use capacities. The FEIS will clarify this point.
Page 3. NPS agrees.
Page 4. Re: Future transit coordination. NPS agrees that it is important to coordinate the implementation of any project or program with local government and adjacent land management jurisdictions. Grand Teton National Park is presently embarking on a transportation planning effort for that very purpose – coordination with Teton County – outside the scope of the winter use plan. Clearly all efforts will need to be consistent in terms of management.
Page 4. Re: Groomed nordic skiing option. NPS reiterates the programmatic nature of the winter use plan and EIS (§1508.18(b)(2) and (3)). While we agree that no alternative proposes a large grooming program for nonmotorized uses, the choice is nonetheless available to the decision maker. In any alternative with an emphasis on nonmotorized recreation, the grooming of some trails may not be entirely inconsistent with the programmatic intent of the plan. This programmatic approach is acceptable under the law. Such documents make decisions and allocations at a general level and defer many specific project decisions (implementing the plan) to a later date. Some site-specific decisions will require additional NEPA analysis and a new decision that is "tiered" (§1508.28) to, or supported by, the programmatic plan. Through additional NEPA, programmatic plans can also be amended.

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Alliance for the Wild Rockies
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Email: awr@wildrockies.org

November 29, 1999

Mr. Clifford Hawkes
National Park Service
Denver Service Center
12795 West Alameda Parkway
Lakewood, Colorado 80228

Re: Winter Use Plan DEIS for Yellowstone and Grand Teton National Parks

Dear Mr. Hawkes:

On behalf of the Alliance for the Wild Rockies (AWR), I am submitting comments pertaining to the Draft Environmental Impact Statement (DEIS) prepared for the Winter Use Plan for Yellowstone and Grand Teton National Parks, and John D. Rockefeller, Jr. Memorial Parkway. AWR appreciates the opportunity to comment on the DEIS and we support the Park's general effort to undertake a winter use plan to address the impacts associated with winter recreation. However, it is clear that the Preferred Alternative will not adequately address the most pressing issues facing both YNP and GTNP. General comments pertaining to the DEIS are provided below, followed by more specific comments relating to focused areas of concern.

GENERAL COMMENTS

Many of the premises supporting the Preferred Alternative are not based upon facts and/or are not credible. The DEIS states on page 27 that the "*Preferred Alternative emphasizes an adaptive approach to park resource management, which would allow the results of new and ongoing research and monitoring to be incorporated, as it becomes available. Monitoring results demonstrating disturbance to wildlife or damage to park resources would be cause to implement actions for mitigating these conditions.*" However, the DEIS itself makes clear that resource damage has occurred for years and continues to occur, and mitigation measures to date have not adequately (if at all) controlled the damage to air quality, water quality, wildlife, geothermal resources, etc.. For example, EPA ambient air quality standards are regularly violated due to excessive emissions from snowmobiles. These air quality standards are definitive benchmarks which have been routinely ignored. Since there are no such benchmarks in place for wildlife or geothermal resources, it is hard to believe that the NPS will make the tough choices which may be required to protect our natural resources in the years ahead. Therefore, standards must not only be developed, but a mechanism must be in place to ensure that such standards are adhered to once the winter plan is implemented.

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Secondly, instead of critically examining the impacts associated with snowmobiles, the NPS seems to assume that snowmobile users have a right to such motorized uses in YNP due to their pre-existing use. The DEIS states on page 38 "*snowmobile use is allowed (on designated routes only) under NPS regulations. A determination must be made that their use is consistent with parks' natural, cultural, scenic, and aesthetic values, safety consideration and management objectives, and will not disturb wildlife or damage park resources.*" A regulation permitting snowmobiles in effect means that snowmobile use is not automatically prohibited. However, the regulation does not mean that snowmobile use MUST be permitted. As noted in the previous paragraph, based upon air quality impacts alone, snowmobile use is not consistent with the park's management objectives. Unfortunately, the DEIS emphasizes visitor preferences over natural resource protection. Table 33 graphically illustrates this bias as five of the six impact topics identified focus on some aspect of visitor use, whereas only one of six focus on natural resources.

Third, projected impacts are misleading. The NPS readily admits huge data gaps exist for most impact areas, and many if not all of the impacts associated with existing uses and various alternatives are unkwown. The DEIS itself is rife with conflicting statements, and hard data to back up most statements is lacking. Moreover, the impact characterization is misleading. Page 158 of the DEIS defines a short term effect as an effect less than 5 years and a long-term effect as a permanent effect. Impacts should be identified so that the public can readily understand the implications of various alternatives. Based upon the NPS mandate to preserve park resources for future generations, long term effects generally should not be permitted. And since scientific analysis is lacking in most instances, and what little data that does exist is typically not conclusive, the preferred alternative that is ultimately adopted should err on the side of being conservative.

Fourth, the DEIS is self-serving in that it develops a series of flawed alternatives, and then argues that the only viable alternative is the Preferred Alternative. For instance, the Preferred Alternative includes the addition of an aggressive safety and enforcement program (page 203), increased interpretive opportunities at geothermal features to heighten public awareness (page 204), eliminating unregulated backcountry use in winter range (page 210) and backcountry monitoring in GTNP to facilitate area closures for the protection of wintering bighorn sheep and moose (page 214). However, there is no logical reason to exclude any of these measures from each alternative proposed. In addition, some of the other alternatives contain management actions that should be incorporated into each alternative. For example, Alternative E proposes the elimination of motorized uses on Jackson Lake.

Finally, the preferred alternative does not adequately address the most pressing issues facing both YNP and GTNP. The Preferred Alternative would allow for the plowing of the West Yellowstone road to facilitate automobile access, thereby causing additional habitat fragmentation. Moreover, the Preferred Alternative would only serve to transfer

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snowmobile pollution, noise, and congestion to other road segments in the Park. The Preferred Alternative would move the CDST into the back country, setting a dangerous precedent, especially in light of the fact that the impacts associated with such motorized use has not been determined. The Preferred Alternative will also lengthen the winter season and increase number and size of warming huts available for public use which may adversely impact wildlife.

TOPICS OF CONCERN

Wildlife

Plowed Roads: Table 4 of the DEIS notes that Alternative C would have moderate to major impacts for ungulates and could affect survivability in the long-term. But such impacts are also possible, though not identified, under Alternative B as it also increases the miles of plowed roads as compared to the No Action Alternative. Page 25 of DEIS notes that plowing operations as per the Preferred Alternative could prohibit wildlife from exiting the road corridor. NPS has not studied wildlife injuries or nonsurvival due to increased energy expenditure (page 184). However, assuming that animals will be trapped by snow berms, specific impacts on various wildlife species should be determined.

Wildlife/Automobile Collisions: Table 4 of the DEIS notes that Alternative C would have the potential for increasing vehicle/animal collisions. But such impacts are also possible, though not identified, under Alternative B as it also increases the miles of plowed roads as compared to the No Action Alternative. However, the DEIS states that animal/vehicle collisions under the Preferred Alternative will be mitigated by prohibiting late night oversnow travel in YNP (11 PM to 5 AM) and by prohibiting travel on the CDST from 8 PM to 5 AM (page 27). However, on page 203 the DEIS states that the travel restrictions associated with the Preferred Alternative would be negligible in reducing collisions because less than 1% of the recorded motor vehicle accidents have occurred between these hours. Alternative F proposes reducing the potential for vehicle/wildlife accidents by prohibiting motorized travel from sunset to sunrise (page 36). If the travel restrictions under the Preferred Alternative are admittedly ineffectual, they should be revised as per the restrictions under Alternative F.

Warming Huts: The proposed warming huts will be located in thermally-influenced areas used by a variety of species during the harsh winter months. The warming huts will increase human use in otherwise unused potential habitat which may cause displacement and avoidance of the areas by lynx and ungulates alike, and may affect bison and elk carcass availability for wolverines and fishers in areas of currently low human use. The DEIS states that negligible to minor impacts are expected on all species, although lynx require unfragmented habitat and virtually nothing is known about the habitat requirements of wolverines and fishers (pages 187-190). Since the impacts associated with the warming huts are not well documented, any additional traffic (vehicular and/or pedestrian) that results due to the adoption of a preferred alternative warrants detailed analysis.

Grizzly: The Preferred Alternative notes that the winter season for oversnow routes would run from mid-December to mid-March (page 29). However, page 121 of the DEIS states that spring emergence dates range from mid-February to mid-April and Alternative F recommends shortening the winter season to early March (page 38). Since the winter season proposed under the Preferred Alternative may conflict with grizzly bears emerging from denning, the winter season should be shortened (rather than lengthened) to prevent human/grizzly conflicts.

Bison: Table 4 of the DEIS states that the effect on bison as an ethnographic resource would likely be minor. The basis for this assertion is not clear since page 193 of the DEIS then states that bison would continue to be adversely impacted by winter recreation. The DEIS notes that Indians consider the presence of recreational equipment and users in the general vicinity of the bison to be disrespectful of the animals. However, NPS notes that consultation with representatives of the affiliated American Indian tribes would continue in order to insure their interests and concerns would be incorporated. However, as page 116 of the DEIS admits, management removals are one of the main causes of bison mortality. Since bison continue to be detained and killed, the NPS apparently consults with tribal authorities and then proceeds to discount their interests. If this process is to be anything more than mere lip service, the NPS needs to develop a better plan for managing bison and truly take Native American interests into account.

Page 18 of the DEIS states that the decision regarding the closure of road segments was deferred because baseline information on wildlife movements still needed to be gathered before the effects of closing the road segment could be evaluated. However, page 116 of the DEIS notes that bison movement has shifted due to their use of groomed roads, and such dispersal leads bison into areas outside YNP (page 166). Clearly, the NPS is aware of the impacts of roads on bison, yet the Preferred Alternative does not adequately address the needs of bison. To date, paranoia regarding brucellosis rather than scientific expertise has dictated the direction of bison management in YNP. The winter use plan should address road grooming as bison migration patterns and management removals are directly linked.

Bighorn Sheep: According to the DEIS, the bighorn herd in GTNP is a low quality, remnant population, geographically isolated from other herds, and persists in a harsh environment. Another small band of sheep from a separate population also use the Gros Ventre River and the cliff area near Kelly. The DEIS notes that there may be some limited interchange between the different herds. A NPS study concluded that travel by snowmobilers and cross country skiers on or near existing or potential bighorn winter range can be particularly harmful and result in physiological and psychological stress on bighorn sheep (page 118-119). The DEIS notes that the effects of human activities in the Teton Range have to be reduced if the bighorn population is to be retained. Since bighorn sheep populations are currently experiencing a great deal of difficulty, no potential adverse impacts should be tolerated. Any alternative adopted should incorporate measures to prohibit human activities in key bighorn winter range.

Lynx: The DEIS notes that lynx abundance is low and that the species needs travel corridors in order to access to snowshoe hare denning areas (page 124). Yet the DEIS states that any adverse impacts associated with the Preferred Alternative are minor. But if the lynx population is low, any loss from the population is likely significant. Therefore, NPS should analyze lynx population levels and habitat requirements before adopting an alternative that might negatively impact the corridors relied upon by this species.

__Eagle__: The DEIS recognizes that bald eagle activity is greater along streams that remain ice free and in thermal influenced areas, and that the raptors are sensitive to human activities. Although the DEIS notes that winter recreation use along road corridors may cause eagle avoidance of prime nesting habitat, the Preferred Alternative provides little in the way of mitigation. In GTNP, nests are only protected as discovered (page 122) and no proactive steps are taken to protect this species. Therefore, impacts associated with the Preferred Alternative were not adequately discussed and should be addressed in more detail.

__Other species__: The Preferred Alternative does not adequately address impacts on Cutthroat trout, Trumpter Swans, moose, Sagebrush lizards, and a host of other species. Contrary to the assertions throughout the DEIS, habitat fragmentation is not a negligible to minor impact for many species.

Noise

Snowmobiles can be heard as far as 10 miles into the wilderness. Yet the DEIS only discusses levels of natural quiet for humans (page 126-129). Page 172 of the DEIS notes that if a sound would be audible 50 percent of the time or more, it was considered to constitute a major impact on natural quiet. The wildlife that resides in the park is subjected to the noise of snowmobiles all winter. Yet, the impact of noise on wildlife is not addressed. It is critical to assess such impacts since the Preferred Alternative will increase snowmobile use in lesser used areas of YNP.

Air Quality

Page 96 of the DEIS discusses impacts to operators from air quality degradation associated with snowmobile emissions. Again, the wildlife that resides in the park is subjected to poor air quality all winter. Yet, the impact of air pollution on flora and fauna is not addressed. Such impacts should be addressed if any type of snowmobile use is being considered in either of the parks.

Water Quality

On page 25 of the DEIS, the NPS states that sand would continue to be used on plowed roads. Under the Preferred Alternative, the DEIS notes that sand would enter the Madison and Firehole Rivers and their tributaries, as these water bodies parallel road segments (page 206). The DEIS admits that sand would cause turbidity and an unnatural substrate deposition, but that it was unknown how this may affect the aquatic resources found in these waterways. This is not a sufficient analysis. The impacts associated with sedimentation must be identified prior to adopting any winter use plan.

Page 109 of the DEIS states that "*snowpack samples from groomed road snowpacks had higher levels of ammonia and sulfate than those taken from roadways, indicating direct source deposition from snow machines*". Page 180 of the DEIS goes on to state that further studies on snowpack and snowmelt chemical analyses are being conducted to determine the effect, if any, of 2-stroke engine emissions on water quality. Most of the roads in YNP parallel river, lakes and other waters. Therefore, any spilled or leaked petroleum products or emission from combustion of fuels would be deposited directly in surface waters during the thaw process, adversely impacting several aquatic species of concern. Again, the impacts associated with potential water quality degradation must be identified prior to adopting any winter use plan.

Geothermal Resources (see wildlife above)

Page 138 of the DEIS states that thermal areas attract large mammals, especially in winter when elk and bison feed near the hot springs. In addition, NPS recognizes that geothermal resources are particularly sensitive because of the length of time it takes for such resources to recover from human abuse (pages 178-179). However, regardless of the potential impacts associated with an increased number of visitors in geothermal basins, the Preferred Alternative proposes the addition of warming hut facilities at both Signal Mountain and Jenny Lake (page 30 and page 204). The DEIS states on page 205 that the new warming huts will cause a minor degree of wildlife displacement and avoidance from geothermal features. It is not clear how NPS arrived at this determination. The DEIS then goes on to state that if winter visitor use is causing direct long term impacts to geothermal features, then those impacts must be mitigated or the features would be closed to visitors (page 205). Since impacts to geothermal resources are be definition long term (permanent), it seems imprudent to propose additional warming huts without a full analysis of impacts. Moreover, new facilities such as warming huts should an analyzed via a site specific EIS.

Plowed Roads/Groomed Trails (see wildlife above)

In YNP, 184.6 miles of roads are groomed, 56 miles are plowed and 14.2 miles are closed to winter travel. Many of these plowed and groomed roads support abundant wildlife populations, including bison (page 136). According to the DEIS plowed roads cause: injury and death to ungulates and other species, habitat fragmentation[1], structural barriers in the form of snow berms, displacement from preferred habitat and causes wildlife to expend extra energy which reduces individual's chance of survival (pages 182 and 209). The DEIS admits that the greater the extent of vehicle routes through the parks, the greater the total area impacted (page 193). Yet the Preferred Alternative calls for the plowing of more road segments. No additional road segment should be plowed.

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[1] In YNP, plowed winter roads cross bighorn sheep winter range and inhibit the movement of moose (page 183).

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Groomed road segments may also impact wildlife in both positive and negative ways. However, the creation of groomed trails which would encourage greater snowmobile use is not warranted. In particular the Preferred Alternative calls for providing the CDST on a separate route that will likely attract more snowmobile users to GTNP (page 198). The impacts associated with separating the modes of winter travel would effectively be doubled for many wildlife species (page 209). Therefore, the CDST should be closed to further use.

Off-Road Use

DEIS seems to contradict itself. First, under subnivian fauna it states: "*Because motorized use to YNP is restricted to the road footprint and in GTNP to the road or its margin, there is no dispersed off-road use, and therefore, no significant impact on subnivian fauna*" (page 83). On the very same page, the DEIS states: "*Damage to vegetation from off-trail winter recreation activities has been documented in a number of studies.*" Table 11 supports the latter assertion over the former as NPS recorded 19 incidents of snowmobiles entering a closed area, 10 incidents of off-road travel, and 10 incidents of suspected intrusion. And of the 890 citation issued to snowmobilers: 18% were issued for off-road travel and 5 percent were issued for entering closed areas. Therefore, NPS should not readily dismiss the impacts associated with off-road snowmobile use. For example, the DEIS states that disturbance of den sites is not a concern because snowmobiles are required to stay on designated roads, and because of the distance of most potential denning habitat from roads (page 186). However, this may not reflect the reality on the ground. It is important that off-road impacts be fully analyzed.

Socio-Economic Impacts

The socioeconomic impact analysis on pages 87-89 of the DEIS is not adequately supported with hard data and is generic in nature. Although winter use estimated expenditures represent only 0.5 percent of the total expenditures, the DEIS paints a picture of extreme reliance on winter tourism[2]. The DEIS states that retail trade and services accounted for about 42% of the 17 counties combined earnings and that recreation and tourism are key to the economic vitality of the area. But some of the earnings from retail/services are generated from the area itself, not solely from tourism. The analysis also does not adequately differentiate winter from summer recreation expenditures, nor does it account for recreation expenditures due to other attractions, such as MSU and visitation to national forests. The projected losses under the Preferred Alternative do not adequately take other economic opportunities into account, such as an increase in other types of visitors. Alternatively, the Citizens' Solution recommends awarding snowcoach concessions to gateway businesses to help their transition away from snowmobiles rentals (see Citizens' Solution below).

Visitor Use

About 66% of respondents to the 1999 winter visitor survey either agreed or strongly agreed with the statement "visitors should have the opportunity to have mechanized winter access to YNP" (page 91). The survey itself is statistically biased since the vast majority of winter visitors are in fact snowmobile users. Moreover, the EIS process is not supposed to be based upon the desires of one small group of people. The goal is to identify impacts associated with proposed alternatives. It is telling that the NPS has undertaken a multitude of visitor surveys, yet baseline wildlife studies have not been undertaken. Visitor use (or in this case pre-existing users) should not drive the EIS process.

Citizens' Solution for Winter Access to Yellowstone

According to the DEIS, the Preferred Alternative would provide a winter experience where none was previously available. However, NPS admits that the magnitude and impacts associated with this alternative is unknown. Instead, AWR supports the Citizens' Solution as this plan would prohibit the plowing of the road to Old Faithful, close the east entrance and allow only snowcoaches in YNP. The prohibition on snowmobile use would prevent a shift in snowmobile users from the West to the South entrance (page 218). In GTNP, the Citizens' Solution would close the CDST and phase out snowmobiles except for administrative use and to access private residences[3]. The Citizens' Solution also limits off-trail backcountry skiers and snowshoers where impacts to wildlife would be adverse. And equally important, the Citizens' Solution advocates further studies to determine human carrying capacity and wildlife needs. 10

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[2] Although 1400 snowmobiles are available for rent in West Yellowstone, it is not clear how many businesses/employees are actually involved in this industry and what percentage of their customers use YNP (as opposed for USFS lands).

[3] However, 2 stroke engines should be banned, decibel levels reduced to 60, and only ethanol blend fuels and synthetic low emission motor lubrication oils used.

AWR appreciates the opportunity to comment on the Winter Use Plan DEIS for Yellowstone and Grand Teton National Parks. Due to the adverse impacts associated with the Preferred Alternative outlined in the DEIS, AWR strongly urges NPS to adopt the Citizens' Solution for Winter Access to Yellowstone as the Preferred Alternative. 11

Sincerely,

Michael Wood
Staff Attorney, Ecosystem Defense Program Director

ALLIANCE FOR THE WILD ROCKIES
Page 1 and 2. Re: It is clear that the preferred alternative will not address the most pressing issues. All alternatives in the DEIS meet the purpose and need for action to a greater or lesser degree. An identified gap between existing conditions and desired conditions form the basis for the purpose and need for action. This purpose is represented by the desired condition shown on page 3 of the DEIS. The underlying need (§1502. 13) is defined by the existing conditions expressed on page 4. Despite the complexities introduced by multiple goals and multiple issues, all alternatives represent possible actions that meet the underlying purpose and need. A decision maker may set the scope of analysis and the decision to be made within the constraints of those dictates.
Page 2. Re: Based on air quality impacts alone, snowmobiling is not consistent with the park's management objectives. The impacts in question are not on their face indisputable, and it is the function of an EIS to focus the issues by addressing those impacts as well as possible. Where management that serves the enjoyment of the people steps over a line in respect to resource preservation, the action to be taken is clear. It is that line, or threshold, that is not often clear. It is up to the decision maker to weight the available data and make the determination of what exactly constitutes impairment. Additional air quality analyses and modeling, formerly unavailable for inclusion in the DEIS, will be included in the FEIS.
Page 2. Re: Conflicting statements in the DEIS, lack of hard data and gaps in the data, so NPS should err on the conservative side when adopting a preferred alternative. An EIS is not, per se, a scientific analysis. It is intended to disclose environmental effects over a range of alternatives, in which the analyses must demonstrate scientific integrity by disclosing methods and making explicit references to sources used (40 CFR 1502. 24). The DEIS does this. CEQ regulations also allow for incomplete or unavailable information, by describing procedures that are to be following in these instances (§1502.22). Any identified gaps in the FEIS will follow the requisite procedures.
Page 2. Re: Flawed alternatives – measures that protect resources, increase public safety and interpretation opportunities should be included in all alternatives. It is within the discretion of the decision maker to set the range of alternatives to be considered. The final selected alternative that is to be documented in a record of decision may mix features from the range of alternatives evaluated in the final EIS. Such mixing can occur as long as the mixed features are consistent with one another, and as long as the effects of such an alternative would not fall outside the range of effects disclosed in the EIS. If the features that the commenter did not support were to be deleted from the range of alternatives, then the analysis would be left only with features that the commenter likes or agrees with. If only the actions that are liked by the commenter remain, then there is effectively only one alternative, or a set of alternatives that are not significantly different. There is a very clear separation between alternatives legitimately considered in an analysis and the expression of a preferred alternative or the decision to be made. Many suggestions for alternatives or alternative features were made in the thousands of comments received. A great deal of criticism was leveled at the current range of alternatives because people did not like the way features were "mixed." It is clear that for such complex issues there could be an infinite number of possible alternatives. CEQ states that in such instances, the agency need only consider a reasonable number of examples that cover the full spectrum of possible alternatives that meet the purpose and need (Question 1b, CEQ 40 Most-Asked Questions). What constitutes a reasonable range depends on the nature of the proposal and the facts in each case, where the proposal is at the discretion of the agency. Under the CEQ regulations, the requirement in an EIS is to provide a range of reasonable alternatives that clearly define the issues, and to fully evaluate and disclose the possible effects of those alternatives. The DEIS meets this requirement.
Page 3. Re: Features of the preferred alternative may adversely affect wildlife. The analysis in the DEIS discloses the impacts to wildlife associated with the preferred alternative. The determination as to whether or not these impacts constitute an impairment or derogation of park values (wildlife, in this case) is made by the decision maker when formulating the Record of Decision.
Page 4. Re: Animals will be trapped by snow berms. The DEIS discusses the impacts associated with snow berms along the plowed road corridor, and

ALLIANCE FOR THE WILD ROCKIES
suggests mitigation (p. 209). NPS and the commenter disagree on whether or not a so called tunnel effect would result from plowing. In many other areas within and outside the 3 park units, roads are plowed and no tunnel effect exists.
Page 4. Re: Preferred alternative does not identify the risk of vehicle-animal collisions under alternative B although there is an admittedly ineffectual mitigation measure proposed. The DEIS discusses vehicle-animal collisions on page 209 for the preferred alternative. See response below.
Page 4. Re: Revise travel restrictions under the preferred alternative to the period from sunset to sunrise. This suggestion is within the range of alternatives that the decision maker may choose among. Please see response, "Page 2. Re: Flawed alternatives…" for a discussion of "mixing" alternative features.
Page 4. Re: Impacts associated with warming huts are not analyzed. Impacts associated with warming huts are discussed for each alternative under the heading "Presence and use of winter supporting facilities".
Page 4. Re: Shorten the winter season under the preferred alternative to protect grizzlies coming out of hibernation. This suggestion is a feature of alternative F and is therefore within the range of alternatives that the decision maker may choose among. A discussion of the impacts of winter use on grizzlies during the pre and post denning periods is included in the biological assessment and will be incorporated into the FEIS.
Page 5. Re: Effects on bison as an ethnographic resource – NPS needs a better plan for managing bison rather than lethal control. The NPS is working to ensure that the Winter Use Plan and the Bison Management EIS/Plan are coordinated and that analyses are parallel and consistent in regard to the effects of winter use on bison. The Bison Management EIS/Plan addresses the issue of bison removals.
Page 5. Re: Address the effects of road grooming on bison migration patterns. In an effort to better understand the relationship of bison movements and the use of the winter groomed road system, managers have instituted studies that address this issue. While groomed roads may have contributed to the redistribution of bison within park boundaries (Meagher 1997), it appears that bison tend to use waterways and off-road trails for much of their travel on the west side of the park (Bjornlie and Garrott 1998), and that much of their movement toward park boundaries may occur on such routes. Monitoring of bison movements in the Hayden Valley and Mammoth to Gibbon Falls sections of the park has found that less than 12% of bison movements occurred on the groomed road surface (Kurz et al. 1998, 1999). However, groomed roads may have allowed larger numbers of bison to exist in the park than in the absence of groomed roads, by allowing access to otherwise unavailable foraging areas, and westward redistribution early in the winter may predispose some bison to exit the park (Meagher 1997). Therefore, closing of groomed roads could have the effect of reducing population size and shifting distribution back to patterns observed before grooming, thereby possibly reducing the magnitude of bison movements outside park boundaries. Conversely, bison are highly social and appear to retain and pass along knowledge through generations, so it is possible that closing groomed roads may not impact bison movements and distribution (Meagher 1985). Research is currently being conducted to better understand the relationship between road grooming and bison movement and distribution patterns.
Page 5. Re: The adopted alternative should protect bighorn sheep. Alternative G identified in the FEIS will include restrictions on backcountry travel in bighorn sheep areas.
Page 6. Re: Analyze lynx population and habitat needs. The biological assessment contains a lengthy discussion and analysis of lynx. This information will be included in the FEIS as well.
Page 6. Re: Include mitigation to protect eagles. The biological assessment contains a lengthy discussion and analysis of bald eagles. This information will be included in the FEIS as well.
Page 6. Re: Adequately address impacts to wildlife species, especially effects of fragmentation. There will be an expanded species of concern and bison discussion in the FEIS. Habitat fragmentation is discussed, by alternative, as a possible outcome of plowing and grooming roads. CEQ regulations do not require exhaustive and voluminous discussion (§1500.4(f)). The amount of detail to be included in an EIS should be that level which is relevant to the decision to be made, and the NPS believes it has adequately met this requirement.

ALLIANCE FOR THE WILD ROCKIES
Page 6. Re: Analyze the effects of noise on wildlife. Because quantifying the effects of non-natural sound on animals in the wild (as opposed to a controlled laboratory setting) is extremely difficult, NPS believes that analyzing the effects of machine noise on ambient sound levels is a legitimate substitute and can be used to infer effects on wildlife. NPS also believes that the effects of noise on wildlife are inherently included in the overall effects of snowmobiles on wildlife in terms of disturbance. Nonetheless, a review of the impacts of noise on wildlife will be included in the FEIS.
Page 6. Re: Address impacts of air pollution on flora and fauna. The evaluation of pollution impacts by alternative is presented in the environmental consequences section of the DEIS. This analysis will be enhanced in the FEIS using results from air quality and modeling.
Page 6. Re: Effects of sand on sedimentation of waterways should be addressed. There is a greater amount of final study information available to the NPS for inclusion in the FEIS than was available prior to the publication of the draft. Water and aquatic resources sections will be updated in accordance with this data.
Page 7. Re: Effects of emissions on water quality should be addressed. The DEIS discusses this issue under the effects on water resources for each alternative and in the environmental consequences section. Additional information has become available (Ingersoll, *Effects of Snowmobile Use on Snowpack Chemistry in Yellowstone National Park, 1998*) since publication of the DEIS, and will be incorporated into the final document.
Page 7. Re: How did NPS determine that new warming huts would only cause minor impacts to wildlife? See pages 169-170 for a description of the methods used to assess impacts on wildlife. The effects of warming huts on lynx are assessed in the biological assessment; this discussion will be incorporated into the FEIS. Warming huts are expected to cause minor impacts because they will be located in the front-country at trailheads where visitor use already occurs. Site-specific analyses will be conducted before any construction begins, and the public will have the opportunity to comment.
Page 7. Re: A full analysis of impacts to geothermal areas is necessary, including site specific EIS. The EIS analysis is aimed at developing a programmatic plan for winter use (§1508. 18 (b)(2). There is no burden to develop site-specific information to support a programmatic planning document.
Page 7. Re: The DEIS "admits" that plowed roads cause impacts yet proposes additional plowed roads in the preferred alternative. Many comments restate the disclosure of effects present in the DEIS. Some commenters refer to any disclosure of an impact as NPS' "admitting" that an action would cause harm. Readers should understand that it is the purpose of an EIS to disclose the possible effects of a proposed action and alternatives to it. References in comments to the "justification" for a preferred alternative is an entirely different issue relating to the decision to be made. Comments expressing opposition or support for an alternative feature are not responded to by changing an alternative or a preference.
Page 8. Re: Close the CDST because the impacts on wildlife are too great. The commenter's opinions will be considered in making the final decision, but that there is nothing in those opinions that substantively would alter the range of alternative features to be evaluated in the Final EIS. It will be up to the decision maker to weigh the available data, evaluate the possible impacts of each alternative, and decide if park resources, including wildlife, are impaired. The impacts in question are not on their face indisputable, and it is the function of an EIS to focus the issues by addressing those impacts as well as possible. The new preferred alternative eliminates snowmobiling in the parks.
Page 8. Re: Snowmobiles violate closed areas and cause adverse impacts. Occasionally snowmobiles leave the groomed surface and travel alongside the road or enter closed areas. These violations are cited by NPS rangers. NPS does not regard this as a usual occurrence, but recognizes the potential for adverse impacts.
Page 8. Re: Off-road impacts need to be analyzed because of the above mentioned violations. See previous response.
Page 9. Re: Socioeconomic impact analysis on pages 87-89 is not adequately supported with hard data and is too generic. NPS disagrees. The analysis is sufficient for producing a programmatic plan, which is general in nature. There is a considerable amount of data invoked in this analysis.

ALLIANCE FOR THE WILD ROCKIES
Page 9. Re: The socioeconomic analysis does not adequately differentiate winter from summer recreation expenditures, nor does it take into account expenditures due to other attractions. The discussion of the existing condition focuses explicitly on winter visitation. Tables five and six are presented as a context, considering the total economy, for comparing economic impacts associated with winter use in the various alternatives.
Page 9. Re: The projected losses under the preferred alternative do not take into account other economic opportunities such as an increase in other types of visitors. This is true. The economic analysis is conservative in that it shows small and negligible economic impacts over the regional economy and the 17-county economy, even if other types of visitors do not choose to come. If other types of visitors come, the various economies are only improved.
Page 9. Re: Visitor use survey was biased, visitor use should not drive the EIS process. The surveys do not drive the process – they represent information available to assess impacts. As this survey information is reported or cited in the DEIS, the limitations of the survey are made evident. Additional survey information is now available for the FEIS, and those data will similarly be accompanied by assumptions and survey limitations. The data is used to report impacts, primarily those involving visitor experience and social and economic environments. This is entirely appropriate under NEPA. The final strategy, or decision, is based on selection criteria used by the decision maker, which are disclosed in the record of decision through discussion of "preferences among alternatives based on relevant factors including economic and technical considerations and agency statutory missions" (§1505. 2(b)).
Page 9. Re: Support for the Citizen's Solution. Expressions of support or objection to specific alternatives or alternative features will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision.

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November 22, 1999

Tel: 303-926-7606

Clifford Hawkes
National Park Service
Denver Service Center
12795 West Alameda Parkway
Lakewood, Colorado 80228

Re: Additional comments on Winter Use Plans Draft Environmental Impact Statement (EIS) for the Yellowstone and Grand Teton National Parks and John D. Rockefeller, Jr. Memorial Parkway

Dear Mr. Hawkes:

The Biodiversity Legal Foundation (BLF) is a non-profit, science based, conservation organization dedicated to the preservation of all native wild plants and animals, communities of species, and naturally functioning ecosystems. Through reasoned educational, administrative, and legal actions, the BLF endeavors to encourage improved attitudes and policies for all living things. The BLF has been involved in winter recreation planning for our National Parks for the past 10 years.

The following is the Biodiversity Legal Foundation's commentary on the National Park Service's (NPS's) Winter Use Plan and Draft EIS:

1. To assist the Park Service in its analysis of recreational impacts, we have enclosed a copy of our most up-to-date (Fall 1999) BLF bibliography regarding the environmental impacts of recreation (221 pp.). Contained in this extensive bibliography are hundreds of articles and reports concerning the impacts of snowmobiles on the natural environment. Please include this bibliography in the formal administrative record and review all of the pertinent and applicable

P.O. BOX 278 LOUISVILLE, CO 80027

literature before making a final decision.

2. The Winter Use EIS is supposed to be a long term planning document for winter use activities in the Parks. By law, the EIS must contain the best available scientific evidence. The mere fact that some of the ongoing winter use studies will not be completed in time to be incorporated into the EIS does not permit the NPS to avoid long term decisions regarding winter use management.

3. The Winter Use EIS must establish long term policies for winter use activities in the Park. It should not be used as a mechanism to promote years of additional study of winter use impacts while delaying substantive changes in environmentally harmful winter use activities.

4. The preliminary list of EIS alternatives published by the NPS is entirely unacceptable. The current list of alternatives provides no substantive change in winter use activities, particularly snowmobiling and trail grooming, despite the overwhelming evidence that such activities have adverse impacts on the environment, wildlife, air quality, and other Park attributes. Most of the alternatives either maintain the status quo or actually promote an increase in human use of the Park during the winter. At present, the NPS has not developed a reasonable range of alternatives and must, at a minimum, include a no-snowmobiling/no-trail-grooming alternative in its analysis. In addition, the EIS must contain a comprehensive analysis of its statutory and regulatory mandates and how these mandates apply to snowmobile use. Specifically, is snowmobiling, as we know it today, even authorized under the legislation establishing Yellowstone National Park?

5. The involvement of the states and local counties as cooperators in the EIS may have corrupted the process and provided these entities with an unacceptable influence in the long term winter use management decisions for these Parks. These entities do not meet the legal criteria to qualify as cooperators, because their expertise is limited to the economic impacts of winter use. NEPA requires that cooperators have expertise with respect to any environmental impact involved in a proposal.

6. The NPS should close down one or, preferably, more trails to snowmobile use during the winter of 1999-2000 to assess the impact of such closures on bison use of the area. The NPS originally proposed to take this action but then, due to political pressures, decided to abandon this strategy despite its own claim that this information was necessary for analysis in the EIS. Though a court has upheld the NPS decision on this matter, the court did not say that closing one or more trails would not produce useful data important for analysis in the EIS. The NPS has the authority to close one or more trails during the winter of 1999-2000 and should exercise this authority to collect this data for analysis in the EIS. No new NEPA analysis is necessary to justify such closures.

7. Additional studies that the NPS should initiate during the winter of 1999-2000 include: expansion of snowmobile emission studies to include polycyclic aromatic hydrocarbons and Methyl Tertiary Butyl Ether, assessment of the impacts of pollutants, including snowmobile emissions, on Park vegetation, assessment of the impact of snowpack pollutants on water chemistry and the aquatic ecosystem during spring snowmelt, initiation of a snowmobile sound monitoring program, assessment of the National Park values (i.e., serenity, solitude, naturalness) important to the general public beyond those people who use Yellowstone or Grand Teton National Parks in the winter, and analysis of all existing telemetry points for radio-collared bison in relationship to groomed or plowed roads in the Parks.

8. The most up to date scientific data available confirms that snowmobile recreation in the Parks results in the harassment of many wildlife species, including bison, elk, mule deer, bald eagles, trumpter swans, coyotes, wolves, and a variety of other species. Snowmobiles may displace these animals from important habitat, force the animals to use extra energy to flee from approaching machines, disrupt feeding activities, and kill wildlife. These impacts, if frequent or severe enough, may adversely impact animal productivity and can result in death.

9. Degrading and illegal air emissions: Snowmobiles release enormous amounts of pollutants into the air. Two-stroke engines used to power most snowmobiles release 25-30% of their gas/oil fuel mixture directly into the environment. According to a recent NPS

study, on a peak day when 2000 snowmobiles enter the Park, 32 tons (64,000 pounds) of hydrocarbons and 88 tons (176,000 pounds) of carbon monoxide are emitted. Over the course of an entire winter, when more than 60,000 snowmobiles enter the Park, that adds up to 1,200 tons (2,400,000 pounds) of hydrocarbons and 2,400 tons (4,800,000 pounds) of carbon monoxide. During one winter, snowmobiles emit 78% of all carbon monoxide and 94% of all hydrocarbons released during the entire year, even though cars and other vehicles vastly outnumber snowmobiles. As a result of snowmobile emissions, federal and state air quality standards have been violated several times in the past. In fact, on February 21, 1995, carbon monoxide levels at the West Entrace of Yellowstone were the highest recorded anywhere in the country. Excessive carbon monoxide at the West Entrance has made Park personnel sick and poses serious health risks to snowmobilers. Snowmobile pollutants which collect in the snowpack may cause deleterious impacts to aquatic species and their habitat upon spring snowmelt.

The Parks should set the standard for clean air, clean water, serenity, and solitude; they should not be playgrounds for pollution belching, loud machines which destroy air and water quality and shatter any semblance of serenity and solitude.

10. The number, noise, and stench of snow mobiles in the Parks substantially degrades the Park experience for non-motorized users (i.e., cross-country skiers, snowshoers). Though natural quiet and clean air are important aspects of a National Park visit, these values are destroyed by snowmobile use. Snowmobiles also are antithetical to the preservation of serenity and solitude in the Parks.

11. Trail grooming to facilitate snowmobile use exacerbates snowmobile impacts. Yellowstone bison, for example, use the groomed trails as energy efficient travel routes to move within and outside of the Park. Once bison leave Yellowstone, many are shot or slaughtered by the Montana Department of Livestock to reduce the perceived, but unsubstantiated, risk of bacteria transmission from bison to cattle. Bison use of groomed trails has not only affected population distribution, movement, and habitat use patterns, but it also has reduced natural winter kill and increased productivity, allowing the bison population to increase to an unnatural size.

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According to Dr. Mary Meagher, the world's foremost authority on wild bison, groomed trails are not only the major factor influencing bison movement outside of Yellowstone, but the trails caused the bison population, in 1994, to be approximately double the size it would have been if groomed trails did not exist in the Park. Prohibiting snowmobiles, snow coaches, and trail grooming in Yellowstone would likely result in a reduction in the size of the Park's bison population and a substantial decrease in the number and rate of bison moving out of the Park where they are killed. Other animals, including elk, mule deer, coyotes, and wolves, also use and may be affected by the groomed trail system.

12. Even grizzly bears, most of whom remain in their dens during the winter season, are adversely impacted by groomed trails. Ungulate carcasses are critically important to grizzly bears, particularly females with cubs, during the spring, but grizzlies won't use carcasses which are close to roads or human settlements. Ungulate, including bison, attraction to and use of groomed trails not only reduces natural winter kills, but the animals who do succumb to winter kill die near the groomed trails which makes their carcasses less available to bears in the spring.

13. Despite the substantial impacts, the NPS fails to consider an alternative in the DEIS which would ban snowmobiles, snow coaches, and trail grooming. As written, the DEIS offers seven alternatives, all of which would modify winter use activities, including snowmobile use to some degree but many of which either allow snowmobile use to continue virtually unchanged (except for some noise and pollution emission modifications under some alternatives), increase snowmobiling opportunities, or increase public use of the Parks in the winter to the detriment of Park wildlife, wildlands, geologic features, and other Park amenities.

The failure of the NPS to consider, given the overwhelming scientific evidence, an alternative which prohibits snowmobiles, snow coaches, and trail grooming is even more egregious, considering the legal mandate to "conserve the scenery . . . and the wildlife therein . . . as will leave them unimpaired for the enjoyment of future generations." In addition, NPS regulations specify that snowmobiling can only be permitted where it will not "disturb wildlife or damage park resources." Snowmobiling and trail grooming clearly violate these legal standards but continue to be permitted in the Parks because of political and local pressures. The NPS should not permit these interests to dictate the continued mismanagement of the Parks to the detriment of Park wildlife and wildlands and to that of the future health and vitality of these magnificent wild places.

14. A new alternative is required that protects the Parks and the long term national public interest. The NPS has failed to develop any alternative which complies with its legal mandate while also protecting the diverse wildlife, wildlands, and other attributes of the Parks. The BLF fully supports The Fund for Animals' "Natural Regulation Alternative" that would accomplish those objectives. The Natural Regulation Alternative is an independent alternative which, if implemented, would: 1) prohibit snowmobiles, snow coaches, and trail grooming in the Parks; 2) minimize road plowing, and 3) evaluate and develop an elevated monorail system to permit public access to the Parks year-round in a manner which would substantially reduce environmental impacts. This alternative would restore natural regulation as the primary management tool for Yellowstone's wildlife, it would reduce the number and rate of bison leaving the Park to be shot or slaughtered by the Montana Department of Livestock, restore the ecological integrity of the Parks, maximize the experience of serenity and solitude when visiting the Parks, and, in time, would permit public access to the Parks year-round with far fewer environmental impacts. The Natural Regulation Alternative would not close the Parks to winter use since non-motorized uses (i.e., cross country skiing, snowshoeing, and automobile access between Gardiner, Montana and Cooke City, Montana) would still be permitted.

15. Local economic pump priming vs. national concerns: The NPS is not beholden to the economic needs of the Gateway communities (West Yellowstone, Montana; Gardiner, Montana; Cody, Wyoming; Jackson, Wyoming) and should not manage the Parks to protect the economies of these cities. The prohibition of snowmobiling and snow coach use would not seriously impact the revenue of these cities and, indeed, could be a blessing by forcing them to diversify. If the NPS is going to consider the economic impacts of its proposed alternatives, then this must include an

analysis of the economic costs of continuing to permit snowmobiles in the Parks, including the cost of pollution, the killing of bison outside the Park, and the cost to the Park's ecology from continued degradation.

16. Additional legal issues: the spirit and mandate of various federal laws such as the Organic Act, the Endangered Species Act, and the Clean Air Act, as well as executive orders 11644 and 11989 direct the NPS to prohibit any recreational activity that causes lasting damage to Park resources and wildlife. Now is the time for the National Park Service to live up to these obligations and fully protect this country's premier wildlife Parks.

17. Conclusion: The continuance of private and commercial snowmobiling in the Parks violates the NPS statutes and regulations which clearly prohibit public uses of the Parks which result in adverse impacts to wildlife, air and water quality, non-motorized recreationists, and Park ecology. With hundreds of thousands of acres of other federal land open to snowmobile use in the Greater Yellowstone Ecosystem, there is no reason to permit snowmobiling in the Parks.

The NPS must give full consideration to a long term public interest alternative which would prohibit snowmobiles, snow coaches, and trail grooming. Failure to do so violates the National Environmental Policy Act.

The Biodiversity Legal Foundation urges the NPS to adopt The Fund for Animals' Natural Regulation Alternative as its preferred winter use management plan for the Parks. This alternative bans snowmobiles, snow coaches, and trail grooming in the Parks; minimizes road plowing; and promotes the development of an elevated monorail system to facilitate, but control, year round public use of the Parks while reducing the environmental impacts of such use. We hope the National Park Service has the dedication and internal fortitude to make a final decision that is in the best interests of the ecological health of these priceless and irreplaceable National Parks.

Thank you for your consideration of our comments.

Sincerely,

D. C. "Jasper" Carlton
Executive Director

Copy: Meyer & Glitzenstein

BIODIVERSITY LEGAL FOUNDATION
Page 2.Re: EIS as a long-term planning document and ongoing winter use studies. Studies monitoring and data collection relative to winter use are and will be ongoing in the park units. By this EIS and the eventual decision, NPS does not foreclose on any necessary management actions for park protection that might be precipitated in the future.
Page 2. Re: Preliminary list of EIS alternatives. "The primary purpose of an environmental impact statement is to serve as an action-forcing devise to insure that the policies and goals defined in the Act [NEPA] are infused into the ongoing programs and actions of the Federal Government (§1502.1)." "The range of alternatives discussed in an [EIS] shall encompass those to be considered by the ultimate agency decision maker (§1502.2 (e))." The purpose and need for action described in the DEIS is sufficiently broad to act as an action-forcing tool. It is within the discretion of the decision maker to set the scope of analysis. Considering that motorized use in the Parks is an existing use, not a proposed use, it is logical to frame the purpose and need in terms that would include that use and facilitate an incremental investigation of the impacts of that use. To do otherwise would result in a narrow scope of analysis and one viable alternative relative to motorized use. The settlement agreement that resulted in a need to develop this EIS requires a comprehensive evaluation of winter recreation use. The presumption that only nonmotorized use should be considered in light of policy, law, regulation and existing use, is not appropriate. NPS disagrees that all alternatives represent the status quo, and that there is overwhelming evidence that certain activities adversely affect the resources to a degree that their preservation is not ensured.
Page 2. Re: Statutory and regulatory mandates and their application to snowmobile use. Sufficient documentation on this point is in the DEIS.
Page 2. Re: Involvement of cooperating agencies. The intent of granting cooperating agency status was in the spirit of cooperation and coordination consistent with NEPA, FACA and APA. The content of the document has been affected, but NPS disagrees that the analysis has been. The document incorporates material from the cooperating agencies, which is reported as a matter of full disclosure even though the results disagree with NPS analysis. Letters from the cooperators and the signed agreements between NPS and cooperators were included in the DEIS, Volume II. These items relate to content. As to inappropriate influence, one need only review media reports, comment letters or other correspondence from the cooperators to obtain their assessment of how they were involved and how influential they feel they have been in the process.
Page 3. Re: Trail closures during winter 1999-2000. A comment about what NPS should have done in the winter of 1999-2000 is moot at this time.
Page 3. Re: Additional studies that NPS should initiate during the winter of 1999-2000. Additional data collection has been undertaken with respect to sound. Additional air quality models have been run. Information is available on snowpack chemistry that was not usable in the DEIS.
Page 3. Re: Impacts on wildlife species. The impacts on all potentially affected species are disclosed in the DEIS.
Page 3. Re: Impacts on air quality. The impacts of snowmobiles on air quality are disclosed in the DEIS.
Page 4. Re: The parks should set the standard for clean air, clean water, serenity, and solitude. The function of various provisions in the range of alternatives is to set limits on impacts, and to set standards/objectives for management in identified zones within the parks.
Page 4. Re: Impacts due to snowmobile use. These impacts are disclosed in the DEIS.
Page 4. Re: Impacts on bison due to trail grooming. Impacts on bison have been evaluated and disclosed in the DEIS. Mary Meagher's work was available for use in the DEIS, and it is cited appropriately.
Page 5. Re: Impacts on grizzly bears. Impacts on grizzly bears have been evaluated and disclosed in the DEIS.

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Page 5. Re: NPS fails to consider an alternative that would ban snowmobiles, snowcoaches, and trail grooming. "The primary purpose of an environmental impact statement is to serve as an action-forcing devise to insure that the policies and goals defined in the Act [NEPA] are infused into the ongoing programs and actions of the Federal Government (§1502.1)." "The range of alternatives discussed in an [EIS] shall encompass those to be considered by the ultimate agency decision maker (§1502.2(e))." The purpose and need for action described in the DEIS is sufficiently broad to act as an action-forcing tool. It is within the discretion of the decision maker to set the scope of analysis. Considering that motorized use in the Parks is an existing use, not a proposed use, it is logical to frame the purpose and need in terms that would include that use and facilitate an incremental investigation of the impacts of that use. To do otherwise would result in a narrow scope of analysis and one viable alternative relative to motorized use. The settlement agreement that resulted in a need to develop this EIS requires a comprehensive evaluation of winter recreation use – the presumption that only nonmotorized use should be considered in light of policy, law, regulation and existing use, is not appropriate. NPS disagrees that all alternatives represent the status quo, and that there is overwhelming evidence that certain activities adversely affect the resources to a degree that their preservation is not ensured. The detriment of actions on park resources is not determined until the requisite environmental analysis determines it to be so. That is the function of an incremental analysis facilitated by the alternatives in this EIS. The decision to be made will weigh the effects analysis and make a determination about the extent of allowable activities in light of park mandates, executive orders, regulations and policies.
Page 6. Re: Snowmobiling and trail grooming clearly violate legal standards. There is nothing in literature that conclusively demonstrates that the resources of the 3 park units have exceeded an "impairment standard." There are a great number of inferences drawn from general studies, or studies that were undertaken elsewhere. Results are extrapolated to the 3 park units, where conditions or circumstances are not demonstrated in the literature to be applicable. There is very little in the literature to provide a solid basis for determining at what point a potential impact becomes an adverse effect on park resources. This is contrary to the commenter's apparent assumption that "impairment standards" are self-evident and agreeable to all. It is the function of the EIS to disclose the extent, magnitude and duration of impacts within the park units to the degree necessary for programmatic planning. NPS maintains that the standard of impairment can be a function of the criteria used by a decision maker in the record of decision, considering impacts disclosed in the EIS.
Page 6. Re: Requirement of a new alternative. NPS disagrees that a new alternative is required. BDF predicates this assertion on a disagreement about the purpose and need for action. CEQ regulations require a range of alternatives sufficient to meet the purpose and need for action (§1502.13). The purpose and need for action is discretionary to the agency and the decision maker (§1500.4(g) and §1501.7(a)(2)) to set the scope of analysis. It is clear the commenter disagrees with the purpose and need. If the court settlement carried as much weight as the commenter feels, it seems there would be no need to actually perform an environmental analysis.
Page 6. Re: Local economic pump priming vs. national concerns. The commenter is undoubtedly aware that the consideration of social and economic impacts is routinely done in any environmental analysis. There are several major reasons for this. First, the scoping process as conducted under §1501.7 inevitably raises the social and economic effects of a proposed action. In many instances, these are regarded as significant issues. Second, the impacts must be considered in the context of society as a whole, the affected region, the affected interests, and the locality (§1508.27(a)). Third, the intensity of impacts on the quality of the human environment must be gauged (§1508.27(b)), where "human environment" is to be viewed comprehensively (§1508.14). Effects (direct, indirect and cumulative) are defined as including both economic and social impacts (§1508.8). As disclosed in the EIS economic impacts on a regional level are negligible, and it is our assessment that the business community would adapt to such changes that might accrue to any of the alternatives.
Page 7. Re: Additional legal issues. Sufficient documentation relative to NPS mandates, executive orders, regulations and policy may be found in the DEIS. The final decision must be consistent with this guidance.

BLUE RIBBON COALITION INC.
"Preserving our natural resources FOR the public instead of FROM the public"
P.O. BOX 1427 - IDAHO FALLS, IDAHO 83403-1427

November 23, 1999

Winter Use Plan
National Park Service
12795 West Alameda Parkway
Lakewood, CO 80228
Attention: Clifford Hawkes

Dear Mr. Hawkes:

The BlueRibbon Coalition is a nationwide organization representing 500,000 motorized recreationists, equestrians, and resource users. We work with land managers to provide recreation opportunities, preserve resources, and promote cooperation with other public land users. Following are my comments, as Public Lands Director, on the Yellowstone & Grand Teton National Parks and John D Rockefeller Parkway Winter Use Plan (Plan) and Draft Environmental Impact Statement (DEIS).

Process

I was encouraged as the states and surrounding counties were given cooperating agency status. Although this was not achieved without some objections and controversy, as work on the Plan progressed, it did appear that a working relationship between the National Park Service (NPS) and these cooperators was developing.

I attended, as an observer, the working session held in Idaho Falls. I was heartened to observe the progressive level of exchange that was occurring between federal, state, and local planning professionals.

This spirit deteriorated rapidly in the spring of 1999 as the selected and proposed alternatives were released for internal review. Little of the information that the cooperators had provided was evident. The proposed selected alternative, Alterative B, was simply outrageous. It provoked an outcry from all quarters. Process-wise, it was a slap in the face to the cooperators; an utter rejection of the assistance they had provided.

The NPS delivered the coup de grace to the process in October when, with great fanfare, it released a compilation of old and biased studies alleging "scientific" evidence of snowmobiles' adverse environmental impacts. Released in such a manner, it provided ample fodder for anti-snowmobile groups to hype its erroneous conclusions in a compliant and unquestioning national press. There's an old saying, "Lies can travel halfway around the world while truth is putting on its shoes." Attempts to refute this smear campaign fell far short.

This information could have been easily included in the EIS, erroneous though it may have been. It could have then been debated and refuted as a part of the process. Instead, this "study" became a tool by which NPS sabotaged its own process.

NPS has so damaged its credibility and relations with the states and surrounding counties that the Senators from these states signed a joint letter of question and rebuke (attached). The tragedy is that it could easily have been avoided, and a true collaborative result could have emerged.

Preferred Alternative "B"

Preferred Alt. "B" will eliminate 70.8% of Yellowstone winter visitors by closing the West Yellowstone entrance to snowmobiles. It will eliminate the Grand Loop experience for everyone. It will eliminate or diminish crucial desired elements of the winter experience for many (48% of winter users as reported in the DEIS). It will eliminate reasonable access to services within and outside Yellowstone. Only 4% of visitors surveyed supported plowing the road prior to the issuance of the Plan and DEIS. Not one group has supported it since the Plan and DEIS was issued.

Plowing and bussing visitors will require a taxpayer subsidy of at least $25 to $40 per person in order to reach the "affordable" rate of $10 to $20. The DEIS does not sufficiently anticipate the cost of plowing the road, the cost of repairing damage to the road bed that plowing will incur.

The Plan claims that affordable means are needed for minority or low income people to visit the Park. However, the DEIS does not consider the cost of getting to Yellowstone, summer or winter. Few of meager means can get this far. Why do you think a bus and a low entrance rate will make a difference to people to whom a $50 - $100 hotel rate is exorbitant?

The Plan and DEIS has ignored the fact that affordable access exists by the means of a plowed road from Gardiner to Mammoth (continuing through to Cooke City). The Mammoth Terraces are world famous, magnificent attractions. Yet only 32% of winter visitors enter from Gardiner - and this percent includes traffic that supports the Cooke City infrastructure (residents and commercial). There is no information on how many visit Mammoth as a destination.

The potential impact of Alt. "B" to wildlife and the resource have not been sufficiently considered. Environmental extremists and opponents of snowmobiling have cited this as have pro-snowmobiling interests. Enjoyment and concern for the well being of wildlife is universal. Among the major concerns are: safety hazards, increased stress during the winter, fragmentation of habitat, and trapping wildlife between snow berms.

We oppose the imposition of four-stroke emission standards on snowmobiles which use two-stroke engines. NPS are not emission experts. NPS needs to defer to the Environmental Protection Agency (EPA) in the development and requirement of emission standards for snowmobiles. NPS has clearly misunderstood the function of a decibel rating by requiring snowmobiles be at 70 decibels (currently they operate at 78). 70 is actually half as loud as 78; this requirement is unrealistic and unmatched by requirements for any other vehicles (including busses).

Revised Alternative E

Alternative E comes the closest to proposing a viable management scenario for winter recreation in the Parks. A wide spectrum of recreationists, organizations, and business leaders worked on the development of Revised Alt. E. It applies adaptive planning that uses new information as it is developed to responsibly manage winter recreation in Yellowstone and Grand Teton National Parks. Adoption of this alternative will allow the results of new and ongoing research and monitoring to be incorporated into Parks winter recreation management.

The research would be independently review to assure that it is not agenda driven. It would assure that well-founded conclusions are applied as new information is achieved. This would apply to all aspects of winter visitation including emissions research, wildlife studies, and sociological studies.

There would be established an advisory committee to assist with study design and prioritization of ongoing research and monitoring. Local, county, state and federal agencies, as well as representatives from the snowmobile industry and environmental groups, would participate on the committee.

As these new directions are being identified, researched, and validated, there are actions that can be implemented now, with what we know now, to improve Parks visitation. These are:

* Require the sale of only bio-based fuels within the Parks. Commercial snowmobile operators outside the Parks as well as the general snowmobiling public would be strongly encouraged to use of these products.

* Establish a visitor carrying capacity based on use patterns related to the past 7 year average to address overcrowding and facility maintenance issues. Use adaptive planning to address long-term carrying capacities for visitors and wildlife.

* Establish a night time closure in the Parks from 10 PM to 6 AM to promote public safety, improve trail maintenance, and protect wildlife.

* Disperse use throughout the Parks by better use of existing visitor facilities. In order to accomplish this, provide additional portable warming huts.

* Revise snowmobile parking in the Old Faithful area to address congestion and visual impact.

* Provide expanded non-motorized opportunities/trails away from motorized routes. For example, provide regular skier shuttles from Old Faithful and West Yellowstone to non-motorized areas away from these visitor collection points.

* Require all entrance passes to be pre-purchased at convenient outlets.

* Maintain the length of the winter use season from mid-December to mid-March.

* Provide a route for the Continental Divide Snowmobile Trail (CDST) that takes advantage of resource conditions, topography and grade so that both winter grooming and summer bicycle use would be accommodated. For example, use the existing utility corridor for much of the trail.

* Improve grooming on the Grassy Lake Road.

* Continue use by snowmobiles and snowplanes on the frozen surface of Jackson Lake.

* Prohibit plowed road access anywhere in the Parks where it does not presently occur, for example Gardiner-Cooke City road and Hwy. 191 from West Yellowstone to Bozeman.

Conclusion

The genesis of good management for the Parks is included in various places within the Plan and DEIS. Unfortunately, these elements are not pulled together into a coherent whole. Instead, it seems as if NPS has decided to pursue political agendas instead of addressing good management for winter recreation for the Parks. Please give serious consideration to my comments and Revised Alternative E. We need to move away from headline-grabbing and toward progressive winter recreation management.

Sincerely,

Adena Cook

Adena Cook, Public Lands Director
Phone: 208-524-3062; Fax: 208-524-2836
e-mail: bradena@sharetrails.org

[illegible]
Page 1. Re: Information provided by cooperators. The commenter is invited to review Appendix A, Consultation and Coordination in the DEIS. This section documents that a large percentage of the suggestions from the cooperating agencies were incorporated into the range of alternatives presented in the DEIS. Development of the preferred alternative is within the purview of the NPS. The NPS is not obliged to incorporate in the preferred alternative the preferences that might be indicated by the cooperating agencies. Many suggestions for alternatives or alternative features were made in the thousands of comments received. A great deal of criticism was leveled at the current range of alternatives because people did not like the way features were "mixed." The final selected alternative that is to be documented in a Record of Decision may mix features from the range of alternatives evaluated in the final EIS. Such mixing can occur as long as the mixed features are consistent with one another, and as long as the features and their effects would not fall outside the range of alternatives disclosed in the EIS (§1505.1(e)). A finding as to that circumstance would be entirely appropriate in the Record of Decision, along with the rationale, should the selected alternative not precisely correspond with one of the "mixes" evaluated in detail.
Page 2. Re: Air Quality Summary Report. Criticism stemming from the release of the draft summary ARD report and its content is beyond the scope of this EIS analysis and requires no response. The content of the report, so far as the alleged faulty information, was not a part of the Draft EIS. The fact that the cooperators disagree with how the document was publicized and distributed does not affect the air resources analysis in the EIS.
Page 2. Re: Preferred alternative rationale. This comment restates the disclosure of effects present in the DEIS. Many commenters refer to any disclosure of an impact as "admitting" something. Readers should understand that it is the purpose of an EIS to disclose the possible effects of a proposed action and alternatives to it, and that references to the "justification" for a preferred alternative is an entirely different issue relating to the decision to be made.
Page 2. Re: Costs of road plowing. A disclosure of the costs associated with road plowing can be found in Volume II, Appendix F, Construction and Operating Costs. The costs of both the existing road plowing and road grooming for snowmobiles are in the end absorbed by the taxpayer. Alternative B proposes no subsidy for a park visitor to ride the mass transit bus to Old Faithful. The cost estimated for that service, as identified on page 29 of the DEIS, is $20 to $25, not $10 to $20.
Page 2. Re: Affordable access. The stated purpose of plowing the road (DEIS, page 28) is to "improve affordable access" – **not,** as the commenter states, to "provide affordable access for minority and low-income people". A thorough reading of the EIS would reveal that a required impact topic in an EIS is to evaluate the effects of a proposed action on socially or economically disadvantaged populations (DEIS, page 80). We disagree that this analysis is used as "justification" for plowing in alternative B. The preferred alternative addressed the issue of affordability because it was raised as a concern during the public scoping process. The cost of entering the park during the winter via snowcoach or snowmobile is much higher than entering the park by bus or auto. The intent was to provide an alternative that would be more affordable. As you note in your letter, subsidizing the use of one particular user group is unfair to the taxpayer and excludes others from enjoying their national parks. Alternative B was intended to address these issues by providing access to the park interior for a greater diversity of park visitors, while protecting park resources. Under alternative B snowmobiles, snowcoaches, and mass transit wheeled vehicles would access the Old Faithful Area. Due, in part, to the clear lack of support for plowing the road to Old Faithful the NPS will identify a new preferred alternative in the FEIS.
Page 2. Re: Access to Mammoth. The DEIS has not ignored that a more affordable access exists from Gardiner, Montana to Mammoth Terraces. This area is described on pages 136, 140, 141,and 145 of the DEIS. The North Entrance is the second busiest winter entrance to Yellowstone. As indicated on page 145 of the DEIS traffic using the highway to access Cooke City, Montana is not counted when compiling visitor use statistics for oversnow access. The Mammoth area is, as you indicate in your letter, a popular attraction. However, it does not typically receive a reliable level of snowfall. While the northern areas of the park are popular, the sights most visitors want to experience are Old Faithful and the Grand Canyon of the Yellowstone (see page 148 of the DEIS).
Page 2. Re: Effects on wildlife. The effects of alternative B on wildlife have been disclosed for stress, habitat fragmentation and the trapping of wildlife in road berms. This analysis can be found in Chapter IV of the DEIS on pages 176-327.
Page 2. Re: EPA and emissions standards. The suggestion that the NPS should defer to EPA on the matter of emission standards for snowmobiles is

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considered in the range of alternatives presented in the DEIS.
Page 2. Re: Decibel levels. The NPS disagrees that the agency has misunderstood the function of a decibel rating. A range of decibel ratings have been presented (from 60 to 78 dB(A)) in the range of alternatives in the DEIS. The analysis of the effects of these various decibels levels on the natural soundscape of the 3 parks can be found for each alternative in Chapter IV of the DEIS. Impacts on the natural soundscape have received further study and this information will be included in the FEIS.
Page 3. Re: Independent review of scientific studies and monitoring: published studies and monitoring reports should be available to the public. For what should be obvious reasons, this information should not be subjected to a political process in advance of their publication. There are policies and protocols already in place to ensure appropriate scientific review. If future studies or monitoring indicate the need for management action, NPS will follow the requirements already set in law (such as NEPA), regulation and policy. At that time, the scientific basis for an action can be scrutinized and criticized by any interested parties.
Page 3. Re: Establish an advisory committee to assist with study design. For obvious reasons, this information should not be subjected to a political process in advance of their publication. There are policies and protocols already in place to ensure appropriate scientific review. If future studies or monitoring indicate the need for management action, NPS will follow the requirements already set in law (such as NEPA), regulation and policy. At that time, the scientific basis for an action can be scrutinized and criticized by any interested parties.
Page 3. Re: Require the sale of bio-based fuels within the Parks. This is a feature of alternatives B, C and D.
Page 3. Re: Carrying capacity. NPS is encouraged by support for establishing a recreation carrying capacity. In practice, setting a carrying capacity is a highly complex and potentially divisive exercise. NPS managers decided there was not sufficient time available in the settlement time frame to devote to this type of analysis. More explanation of the carrying capacity issue will be included in the FEIS.
Page 3. Re: Nighttime closure. This suggestion will be analyzed as part of alternative G in the FEIS.
Page 3. Re: Disperse use to better utilize existing facilities. Alternatives C, D and G conceptually include the opening of such facilities to one degree or another. A reference to other plans and environmental analysis on page 17 of the DEIS includes commercial services plans for both parks. Since these plans were in process, the decision was made not to include analysis of facilities currently being addressed. Several alternatives (B, C and D) propose new warming huts.
Page 3. Re: Congestion and visual concerns at Old Faithful. This suggestion may be useful in site-specific implementation of any of the alternatives retaining snowmobile use at Old Faithful. It is not a key programmatic feature; i.e. it does not require an EIS analysis for approval – it could be done now.
Page 3. Re: Expanded nonmotorized routes away from motorized routes, served by shuttle service. Additional routes are proposed in alternatives B, C, D and G. This suggestion is programmatically compatible with all alternatives, and could be implemented without further significant environmental review (as a function of the Winter Use EIS and the decision resulting from it). Whether solitude can actually be achieved by this separation depends upon site characteristics and the degree to which motorized use sounds travel in the area.
Page 3. Re: Prepaid passes requirement at West Yellowstone– prepaid passes for other gates. Pre-paid passes are available in West Yellowstone. Should the need arise at other gates for the same reasons, the service could be expanded. The rationale for this measure – mitigating pollution impacts on visitors and employees – has a cost associated with it. Opportunities for necessary NPS-visitor contact at the gate are lost. Suggesting that all visitors forego an important safety element of the park experience, so that their snowmobiles will be less polluting is clearly not in compliance with 36CFR 2.18. The regulation states that snowmobiles are prohibited except where designated and only when their use is consistent with the park's natural, cultural, scenic and aesthetic values, safety considerations and will not disturb wildlife or damage park resources. In this case, mitigating an effect on park values and resources by completely *eliminating* an important information and safety resource for park visitors is illogical. Voluntary compliance with this management option is reasonable, but

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only for those visitors who wish to utilize it.
Page 3. Re: Length of season. The length of the winter season is currently mid December to mid March and is analyzed as part of alternative A, the no action alternative.
Page 4. Re: CDST. This suggestion is a feature of alternative B in the DEIS.
Page 4. Re: Improve grooming on the Grassy Lake Road and permit commercial outfitters. These measures do not require a programmatic EIS. They could be considered at any time.
Page 4. Re: Continue snowmobiles and snowplanes on Jackson Lake. This suggestion is a feature of alternatives A and C in the DEIS.
Page 4. Re: Continue existing plowed road access in YNP. This is a feature of alternatives A, D, E, F and G.

BLUEWATER NETWORK
Protecting the Earth
for all Living Creatures

November 23, 1999

Clifford Hawkes
NPS - Denver Service Center
12795 West Alameda Parkway
Lakewood, CO 80228

Re: Proposed Winter Use Environmental Impact Statement Comments

Dear Mr. Hawkes:

On behalf of Bluewater Network, we respectfully submit the following comments on the National Park Service's (NPS) draft Winter Use Environmental Impact Statement for Yellowstone and Grand Teton National Parks.

Federal law such as the Organic Act, the Endangered Species Act, and the Clean Air Act, as well as court cases (ie. *SUWA vs. Dabney*) and executive orders 11644 and 11989 direct the NPS to prohibit any recreational activity that causes lasting damage to park resources and wildlife. However, we fail to see how NPS management of recreational snowmobiling in the Greater Yellowstone Area (GYA) complies with these legal mandates. For example despite the fact that snowmobile noise may be heard as far as five miles into Yellowstone's backcountry, the NPS preferred alternative permits these machines on 180 miles of park roads. Therefore, under this alternative the roar of snowmobiles conceivably could impact more than 40 percent of Yellowstone and Grand Teton National Parks and John D. Rockefeller National Memorial Parkway (*see enclosed maps*).

Besides destroying natural tranquility, snowmobiles also cause lasting damage to air and water quality, area wildlife, public health and safety, visitor enjoyment, and local economies. (*See Bluewater Network's enclosed snowmobile petition for an expanded explanation on these impacts*).

Therefore, we strongly support the recommendations made in the Citizen's Solution. In particular, we endorse the Solution, which will:

1. Restore natural sounds, protect the air and water, protect wildlife, ensure public health and safety, and preserve visitor enjoyment by phasing out snowmobiles in Yellowstone and Grand Teton.

2. Institute a group travel system in Yellowstone using snowcoaches only.

3. Discontinue the Continental Divide Snowmobile Trail in Grand Teton.

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We believe the Citizen's Solution is the superior alternative to all other winter use management options (including the NPS preferred alternative) since it better protects the natural values of the parks while providing park visitors with safe, efficient and affordable access.

We thank you for your consideration. We look forward to your prompt response.

Sincerely,

Russell Long, Ph.D.
Executive Director

Sean Smith, M.S.
Conservation Director

BLUEWATER NETWORK
Protecting the Earth for all Living Creatures

December 1, 1999

Clifford Hawkes
NPS - Denver Service Center
12795 West Alameda Parkway
Lakewood, CO 80228

Re: Proposed Winter Use Environmental Impact Statement Comments

Dear Mr. Hawkes:

Please add the following to our comments dated November 23, 1999.

Despite our belief that snowmobile are inappropriate for the Yellowstone and Grand Teton National Parks, Bluewater Network recognizes that the NPS may disagree with our interpretation of the Organic Act and other Park policies, and may continue to allow snowmobiles in certain areas of the GYA. In the interests of insuring the maximum protection of park resources, Bluewater Network hereby submits suggestions for moderate improvements of the winter EIS. To reiterate, we are not suggesting that the NPS adopt the below listed recommendations. We feel only a ban is appropriate. However, the following changes would reflect a modest improvement over the NPS draft management plan, better protect natural resource values and be more in keeping with the Organic Act requirements, as well as other park management doctrines, than the current proposal.

A. Noise Pollution

Noise from snowmobiles destroys the peaceful silence that many visitors to the National Parks come to enjoy. Every year the National Park Service at Yellowstone and Grand Teton receive numerous complaints from park visitors about how difficult it is to avoid snowmobile noise.

The disruptive and annoying nature of snowmobile noise occurs as a result of intensity and frequency combined with erratic and unpredictable fluctuations and "changeability." This noise also has the ability to travel great distances. The Park Service at Yellowstone has received visitor complaints that snowmobiles can be heard at Shoshone Lake, about two and half miles from snowmobile traffic, and also at Heart Lake, which is almost six miles from snowmobile access (*see maps #1 and #2 for areas that could be impacted by snowmobile noise*).

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According to the National Institute on Deafness and Other Communication Disorders (NIDCD), people in immediate proximity of snowmobiles, such as cross-country skiers, will commonly experience noise levels exceeding 100 dBA. By comparison, a jet flying 1000-ft overhead produces an equivalent noise level. The Environmental Protection Agency states that people with regular exposure of more than a minute to sound levels exceeding 100 dBA risk permanent hearing loss.

Protecting access to natural sounds is of major importance to the general public. A recent poll conducted by Colorado State University found that 95% of Americans rated the protection of natural peace and sounds as either somewhat or very important. This same poll also revealed that nine out of every ten respondents believe that snowmobiles in the National Parks should be banned or limited.

Under the preferred alternative, snowmobile operation will continue on roads where noise will severely impact non-motorized forms of recreation. In particular, snowmobiles could impact cross-country skiers in the Mammoth Hot springs area and along the Teton Park road. To reduce these impacts we suggest the elimination of snowmobile use on Yellowstone's Norris to Mammoth Hot Spring road, Grand Teton's Antelope Flats road, and all of Jackson Lake. Furthermore, the preferred alternative permits snowmobile operation during the hours of 5:00 a.m. to 11:00 p.m., thereby exposing visitors and wildlife to snowmobile clamor 18 hours a day. A more reasonable and fair management of snowmobiles would limit their use to 6 hours of operation a day (*for more on the temporal restrictions of snowmobiles please see the wildlife section*).

B. Air and Water Pollution

Virtually, all snowmobiles on the market today are powered by two-stroke engines, a technology developed in the 1940s. These engines are incredibly inefficient and highly polluting. According to the US Environmental Protection Agency (EPA), snowmobile engines dump 25 to 30% of their gas/oil mixture unburned into the environment Bluewater Network estimates that the 60,000 snowmobiles that visit Yellowstone dump over 100,000 gallons of unburned gas and more than 2,000 gallons of unburned oil into the park. A recent NPS report on snowmobile's impact on air quality found that despite being outnumbered by other vehicles 16 to 1, automobiles emit 100 times more carbon monoxide and 300 times more hydrocarbon than modern snowmobiles.

The snowmobile industry maintains that everything is being done to clean up their product. In the preferred alternative, it appears that the NPS accepts the industry's claim by *requiring a 70% reduction in* hydrocarbons, 40% *of carbon monoxide* and 75% reduction in particulate matter by the winter 2008-2009. However this timetable is far too long. Unrestricted four-stroke engines (e.g. absent a catalytic converter), powering today's automobiles outboard motors, and many other vehicles and craft and are 97% cleaner than two-stroke engines, and have already been fitted into snowmobiles (*see*

Redline Snowmobile information). Even snowmobile advocates believe the industry is dragging its feet to incorporate cleaner technology (*see Matt Mead Article*). Therefore, the EIS should be amended to require that only the cleanest possible snowmobiles be used in the parks. Successful Eco-labeling programs have been designed by the Air Resources Board in California, and are used to restrict or prevent operation of the dirtiest personal watercraft and outboard engines in sensitive water bodies. The Environmental Protection Agency will be considering an ecolable program for all new snowmobiles as it develops its new snowmobile emissions rule in 2000. Bluewater Network suggests that the NPS encourage the development of EPA's program, and by 2002, only allow those snowmobiles with the best possible environmental label. However, it must be noted that even the cleanest snowmobiles will not alleviate all impacts associated with snowmobile activity.

B. Safety Issues

According to Dr. Michael Landon of New Mexico State's Public Health Department, snowmobile operators are nearly nine times more likely to be killed or injured than operators of automobiles on a per mile comparison. Severe snowmobile injuries repeatedly include internal organ damage, bone fractures, spinal chord severing, deep tissue lacerations, avulsions, and bruises. If the victim is to recover from these injuries, significant search and rescue (SAR) resources are required. In response to the need for significant SAR resources to ensure safe snowmobile operation, we encourage the NPS to limit snowmobile use to those times and places where visitor protection coverage is highest.

According to a Consumer Product Safety Commission Hazard Sketch Report the second leading cause of death for snowmobile operators is drowning. The most effective way of eliminating the threat of drowning is to immediately ban operation on waterbodies such as Jackson Lake.

C. Unique Resources

In June 1998, Judge Kimball of the U.S. District Court in Salt Lake City in *Southern Utah Wilderness Alliance vs. Dabney* [7 F. Supp. 2d 1205 (D. Utah 19980] ruled that the NPS cannot allow recreational activities, such as snowmobiling, that permanently damage unique park resources.

In a 1997 report to the National Park Service, Dr. John Caslick, a Park Service biologist, recognized the importance of thermal features to park wildlife. During long, harsh winters, thermal features are a critical oasis for wildlife, often providing the only source of warmth and food. He recommends banning snowmobile operation at these sites. For the proposed EIS to comply with the *SUWA vs. Dabney* ruling as well as Dr. Caslick's recommendations, snowmobiles must be banned at thermal features such as West Thumb Geyser basin, the Mud Volcano/Sulfur Caldron, the Norris Geyser basin, the Upper Geyser Basin, and Mammoth Hot Springs.

D. Wildlife Impacts

Ungulates

Snowmobiles also negatively impact park ungulates, raptors, predators and fish. For example, a study investigating the impact of snowmobile traffic on moose in the Greys River Valley, Wyoming found that moose bedding within 300 m and feeding within 150 m of passing snowmobiles alter their behavior in response to the disturbance. Scientists are finding that during the winter, activities such as snowmobiling that negatively influence energy intake, rather than energy expenditure, have a much greater influence on the energy balance of ungulates. To better protect large ungulates, such as the moose, snowmobiles should be banned in the Hayden Valley and on the Grand Teton park road between Jackson Lake Junction and Moran Entrance Station.

Bald Eagles

In a report authored by the Wyoming Game and Fish Department, researchers speculate that recreational snowmobiling adversely affects the survival rate of the American Bald Eagle by disrupting nest initiation at a critical time, causing failure of egg incubation. Therefore, we recommend removing snowmobiles from Bald Eagle habitat.

Predators

Snowmobiles also negatively impact GYA predators such as lynx, and endangered species such as the Grizzly Bear, and Gray Wolf. The NPS at Voyageurs found that wildlife such as the wolf "avoid or are displaced from prime [habitat]" by snowmobiles. Yellowstone's Soda Butte pack often moves between Yellowstone and Grand Teton. The Grassley Lake Road within the John D. Rockefeller Memorial parkway bisects the potential hunting territory of this pack. To better ensure the survival of the Soda Butte pack, snowmobiles should be removed from the Grassy Lake Road.

Fish

Scientific studies also show that snowmobile emissions deposited upon the snow have a detrimental impact upon fish. Therefore, to better protect unique fish species such as Yellowstone's cutthroat trout *(Onchorynchus clarki bouvieri)*, snowmobiles must be banned along rivers and lakes.

Short of total removal of snowmobiles from critical wildlife habitat, scientists such as Dr. Caslick recommend that snowmobile traffic be limited to the middle hours of daylight (10 am to 4 pm) to minimize wildlife disturbance during the early morning and evening feeding periods.

E. Mass Transit

Americans should have an opportunity to access the Yellowstone area during the winter months. However, the modes of transportation by which the NPS permits the public to access the area must be in harmony with the NPS mission to leave park resources unimpaired. We believe snowcoaches best balance these needs. Accordingly, Bluewater Network supports the establishment of an area-wide mass transit system. Snowcoaches also provide park visitors the opportunity to receive on-board NPS ranger-led interpretation programs. Quality interpretation of Yellowstone and Grand Teton National Parks may increase visitors' appreciation for the parks as well as their willingness to protect the area's fragile resources.

Snowmobile advocacy groups maintain that the NPS must protect "special winter visitor experience(s)." It is safe to assume that they believe that recreational snowmobiling is one of the "special winter visitor experience(s)" requiring protection. However, the recent court decision in *SUWA vs. Dabney* contradicts the belief of snowmobilers that the NPS must protect visitor experiences. In this case the District Court of Utah ruled that "visitor enjoyment" as used in the Organic Act refers "to the enjoyment of park scenery and wildlife, not to visitor enjoyment of outdoor recreational activities."

* * * * * * * *

In addition to repeated admonitions from Congress (*see Vento/Shays Letter*), federal courts, and the Park Service itself that, the preservation mandate should be the agency's highest priority, the American people themselves have recently made it clear that, in their view, the preservation of our National Parks must continue to be the paramount management objective of the Park Service. In a recent 1998 survey by the National Parks and Conservation Association, Americans rated the preservation of the National Parks' air and water quality, wildlife habitat, and natural ecosystems as immensely more important than utilization of the parks for recreation and tourism. Darla S. DeRuiter and Glenn E. Haas, National Public Opinion Survey on the National Park System, Executive Summary Report at 12; see also USA Today, February 19, 1998 ("For Parks' Sake, Enact Ban") Seattle PI, November 2, 1999 ("Fuel from Snowmobiles polluting Yellowstone"), Los Angeles Times November 3, 1999, ("Ban Banshees in Yellowstone"), and San Francisco Chronicle November 14, 1999 (Snowmobile Threaten Yellowstone Wonderland"). Moreover, almost 70% believed the parks should be managed for future generations rather than present use. In sum, prohibiting snowmobiles and trail grooming would be consistent with the long-standing mission of the Park Service, recent initiatives of this Administration, and the will of the American people.

In conclusion, we believe that the motorized recreation industry fails to comprehend the spirit and purpose of the National Park System. Snowmobile advertisements which make statements such as *"Be on a first name basis with the sound barrier"* or, "*When winter* *throws you a curve, shred it*" flaunt the industry's belief that areas such as Yellowstone and Grand Teton are just another place for snowmobile riders to exploit in search of further thrills. These ads promote a vision of the parks that reduces the awe-inspiring setting of Yellowstone, or the magnificent lakes of the Grand Tetons, to the status of side shows at an amusement park. The National Park System is much more - it symbolizes America's national heritage. Only forms of recreation that are compatible with that heritage should be permitted.

We formally request that the NPS prohibit snowmobiles throughout Yellowstone and Grand Teton National Parks, as well as the John D. Rockefeller Memorial Parkway.

Sincerely,

Russell Long

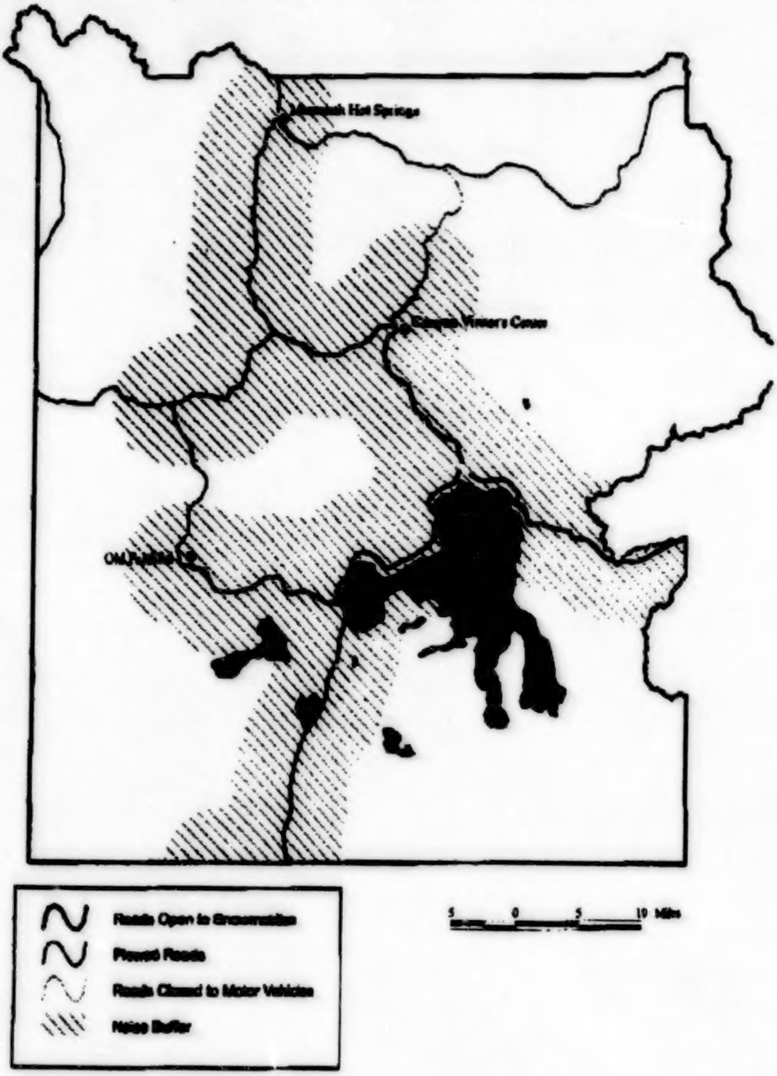
Sean Smith

Russell Long, Ph.D.
Executive Director

Sean Smith, M.S.
Conservation Director

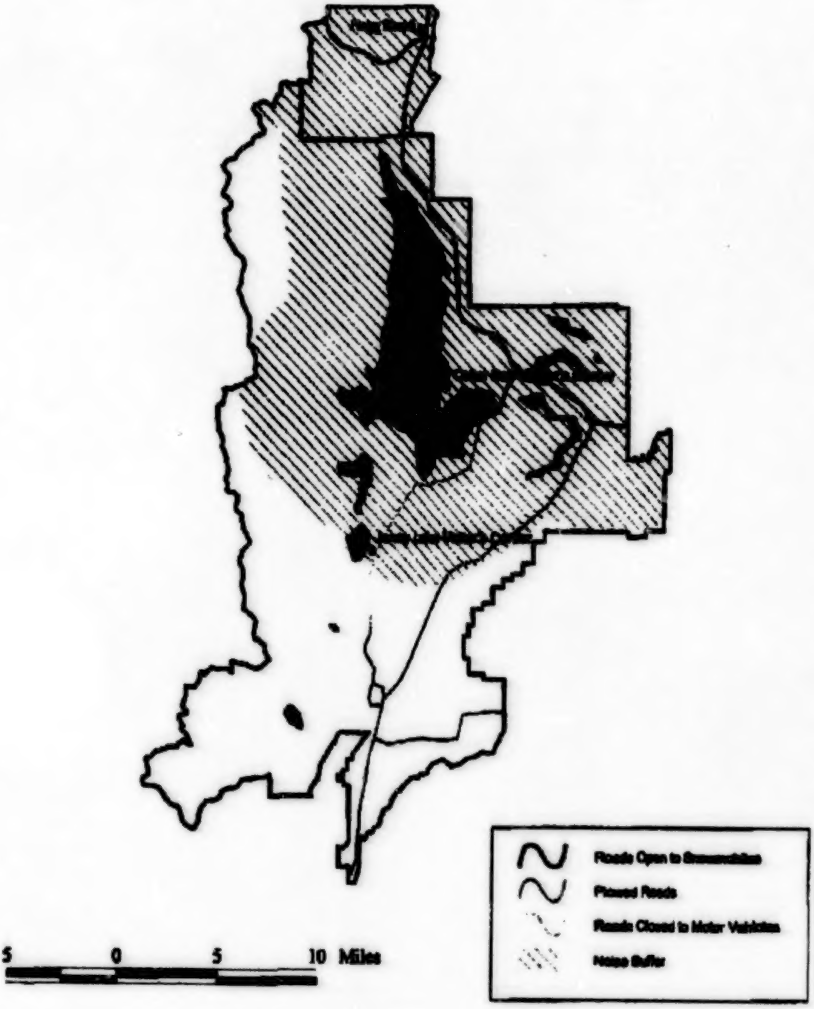
YNP Area Impacted by Snowmobile Noise

Noise buffer defined by 5 mile distance from snowmobile areas



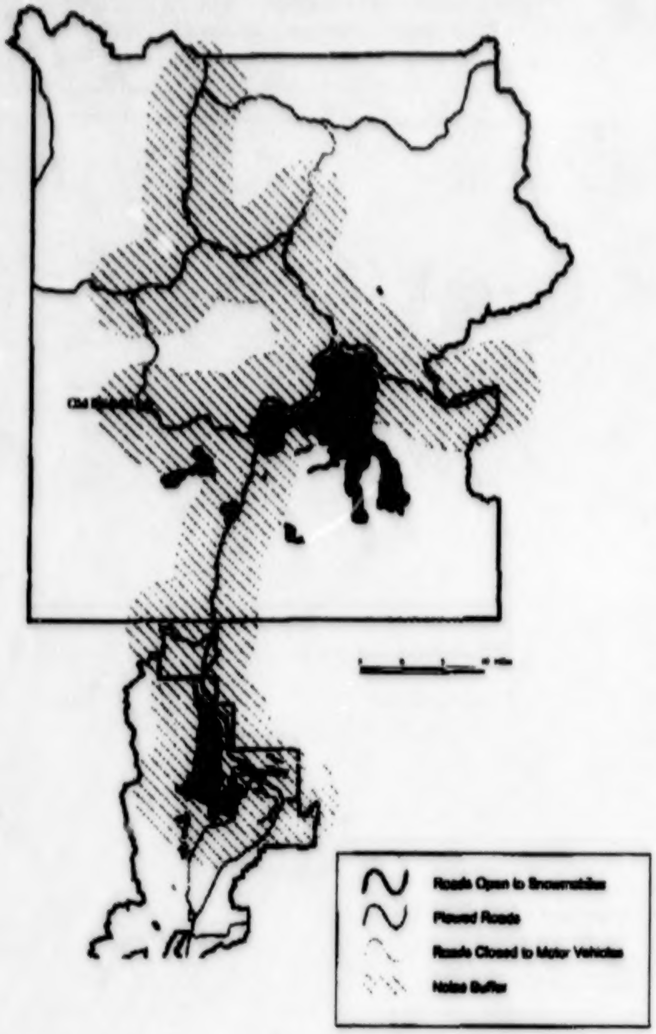
GTNP Area Impacted by Snowmobile Noise

Noise buffer defined by a 5 mile distance from snowmobile areas.



YNP/GTNP Area Impacted by Snowmobiles

Noise buffer defined by 5 mile distance from snowmobile areas



BLUEWATER NETWORK
Page 2. Re: Health – EPA report on damaging sound levels. NPS will review available literature and consider existing sound levels in comparison to findings by EPA.
Page 2. Re: Visitor surveys, visitor preferences. Additional surveys have been completed by NPS since the DEIS was published. The results will be reported in the FEIS. Information in the comment reflects conclusions about visitor expectations presented in the DEIS
Page 2. Re: Reduction of noise impacts on cross-country skiers. These features are considered within the present range of alternatives in the DEIS. The decision to be made will address sound impacts.
Page 2. Re: Limit snowmobile use to 6 hours a day. The EIS seeks to determine the impacts of snowmobile use. This feature could be implemented through the decision to be made.
Page 2. Re: Air and water pollution. Since publication of the DEIS, more studies on air and water are available for inclusion in the FEIS. Additional quantification of related impacts is possible.
Page 2. Re: Timetable for implementation is too long in alternative B. Mitigation of impacts for the various alternatives will be incorporated into the FEIS. Interim limits on use, pending recreation capacity analysis, will be considered.
Page 3. Re: Amend EIS to require cleanest possible snowmobiles. The EIS is not the decision. The EIS evaluates a variety of alternatives in moving from the existing to the desired condition, and their consequences. The eventual decision will select an alternative based on the disclosed impacts as compared to NPS mandates, executive orders, regulations and policies.
Page 3. Re: Health and safety. Health and safety factors and current conditions are discussed in the DEIS on pages 93-103. The degree to which each alternative improves conditions is disclosed in DEIS Chapter IV.
Page 3. Re: Health and safety. These comments go to the decision to be made. Alternatives were formulated to evaluate alternative approaches to safety, including closing various road segments to over-snow motorized use and eliminating this use from Jackson Lake. All alternative features are available to the decision maker in considering health and safety issues.
Page 4. Re: Unique resources – thermal features. This comment goes to the decision to be made. Commenter expresses how and why the decision ***must*** be made. This goes to the purpose and need for action and the decision to be made by NPS. The final strategy, or decision is based on selection criteria used by the decision maker, which are disclosed in the record of decision through discussion of "preferences among alternatives based on relevant factors and agency statutory missions" (§1505.2(b)). Possible impacts on thermal features are disclosed in the DEIS.
Page 4. Re: Impacts on ungulates. Impacts of winter use on ungulates are disclosed in the DEIS for each alternative. Alternative F was designed to address issues relating to wildlife impacts.
Page 4. Re: Impacts on ungulates. This comment goes to the decision to be made. Commenter expresses how and why the decision should be made. This goes to the purpose and need for action and the decision to be made by NPS. Choices are available to the decision maker for protection of large ungulates. The final strategy, or decision is based on selection criteria used by the decision maker, which are to be disclosed in the record of decision.
Page 4. Re: Bald eagles. The impacts of winter use on bald eagles are disclosed in the DEIS, and further documented in the Biological Assessment to be produced in conjunction with the FEIS. The recommendation to remove snowmobiling from eagle habitat goes to the decision to be made.
Page 4. Re: Predators, protection of wolves. The impacts of winter use on predators are disclosed in the DEIS, and further documented in the Biological Assessment to be produced in conjunction with the FEIS. The recommendation to remove snowmobiling from grassy lake road to protect the Soda Butte wolf pack goes to the decision to be made.

Page 4. Re: Ban snowmobile use along lakes and rivers to protect fish. The impacts of winter use on snowpacks, water and aquatic resources are disclosed in the DEIS. More information on these impacts is available since the publication of the DEIS, and will be incorporated into the analysis. The recommendation to essentially remove snowmobiling from most of the 3 park units goes to the decision to be made.
Page 4. Re: Snowmobile operating hours. Several alternatives in the DEIS limit operating hours for oversnow motorized use. This choice is available for the decision to be made, based on the assessment of effects in the FEIS.
Page 5. Re: Mass transit. Alternative G provides for oversnow mass transit only.
Page 5. Re: Park mission and mandate. Park mandates also include visitor use. Management must balance use and resource needs in ways that ensure preservation for future generations. Where impacts clearly indicate that adverse impacts are occurring, NPS must act. Without a finding of adverse impact through environmental analysis, it is not proven, on its face, that snowmobiles and trail grooming are inconsistent with the mission to any degree greater than roads, auto use and developed facilities.

The Ecology Center, Inc.
801 Sherwood, suite B
Missoula, MT. 59802

November 30, 1999

The following comments are submitted on behalf of The Ecology Center, Inc. for the Winter Use Plan DEIS for Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr. Memorial Parkway.

As a co-plaintiff in the lawsuit, The Fund for Animals, et al. v. Bruce Babbitt, et al. (Civil Action No. 97-1126 [EGS]) filed in the US District Court for the District of Columbia, its subsequent Settlement, and final Memorandum Opinion and Order (March 31, 1999), the following comments are intended to underscore our intentions with preserving the integrity of the winter environment in the Greater Yellowstone Area (GYA).

Our first concern has to do with the designation of the No Action Alternative (Alternative A). As the No Action is currently construed, it is a continuation of current management direction as provided for in the 1990 Winter Use Plan (WUP). The Winter Use Plan DEIS then appears to be substituting the existing WUP for a true No Action Alternative. If the Final EIS were to choose the No Action Alternative as it exists (WUP), then it would be making a decision to take action: specifically those actions called for in the WUP, and that have been successfully challenged in court.

Furthermore, the NPS agreed in its settlement agreement, and in its opening summary to provide an EIS "addressing a full range of alternatives for *ALL* types of winter use..." (DEIS, page iii–emphasis mine). The range of Alternatives is neither "full" nor does it contain a true No Action Alternative, as required by NEPA.

In order to compare the effects that the various Alternatives have to a baseline condition, it is necessary to designate the No Action Alternative as an Alternative that does not allow any winter use at all–take no action; allow no activity. The current WUP has already been shown to be legally deficient by the NPS' agreeing to settle the Fund Lawsuit. It would seem to be a bit ludicrous to use an EIS to legitimize the WUP, if the NPS were to choose the No Action Alternative and would most likely send it right back to Court. That is not to say that the WUP does not deserve to be studied in the EIS, just that it does not take the place of a true No Action Alternative. The WUP, as the DEIS treats it, is a regular Alternative, not a No Action Alternative.

In addition to lack of a true No Action Alternative, the NPS has chosen a rather narrow range of Alternatives. There are no Alternatives that call for only non-motorized forms of winter use. The NPS seems to take it for granted that motorized use in the Park in winter is acceptable in some form or another, not whether or not motorized use is acceptable.

Though the DEIS and its Appendices try to mollify those who would propose that winter use be limited to non-motorized methods, there is nothing in any of the quoted materials that MANDATES that motorized use must occur in the winter (as opposed to other seasons). This is a fatal flaw in the formulation of the "Desired Condition" of the DEIS. The language in the citations in Appendix C do not at any point mandate the NPS to allow motorized use in the winter. Thus we are of the opinion that the NPS has satisfied any mandate to provide motorized access to the Parks IN GENERAL through its allowance of a large amount of non-winter motorized use.

On another tangent, the NPS has failed to provide for any meaningful cumulative effects analysis of motorized use YEAR-ROUND on the environment of the Parks. What this DEIS has attempted to do is to abstract out a portion of the motorized use (winter) and analyze that. The Park is trying to piece-meal its motorized transportation policy, in direct violation of NEPA. Unfortunately, a great deal of non-winter motorized use does occur, that when compounded with the motorized winter use contemplated in the DEIS, may reach significant impacts on resources, wildlife, and threatened and endangered species.

The DEIS also has neglected to, in any meaningful way, attempted to analyze the cumulative effects on lands and wildlife surrounding the Parks. Shifts in Park winter use management, and changes in motorized usage will have significant effects on wildlife species outside the Parks. The DEIS does a cursory acknowledgement of those impacts, but does not provide any solid data by which federal, state, county, and private land interests and public interest organizations can begin to study and plan for the changes that would be imminent under the Alternatives presented in the DEIS.

One of the reasons that the Ecology Center participated in the Fund lawsuit was for our concerns about the bison population. Motorized winter use in Yellowstone has resulted in an abnormal pattern of migration that has many side effects, including increased mortality and removal of bison carcasses from the GYA during Montana Department of Livestock slaughter operations outside of Yellowstone. This removal of bison carcasses has led to a decreased availability of spring food sources for grizzly bears. There is no mention in the DEIS of the cumulative effects of the removal of these carcasses, and the loss or decrease of other critical food sources (cutthroat trout and white bark pine nuts) necessary to the survival of the grizzly.

Nor is there any significant analysis of the effects that increased use of lands adjacent to the west side of the Park, by snowmobiles that will be displaced by the preferred Alternative, on eagle populations on Horse Butte. Essentially, the current motorized use patterns on the west side of Yellowstone have created an atmosphere of wide-open snowmobiling. Unfortunately, doing the right thing--shutting down snowmobiling in the Park--will lead to greater use outside of the Park. West Yellowstone has become synonymous with being the snowmobile capitol of Montana through tourism promotion by the City, the State, and user groups, and that use will not significantly decrease--it will just move elsewhere until Federal and State agencies outside of Yellowstone complete a Winter Use Plan for their lands. The Park has created a situation that it must now carefully think its way out of: how to decrease or eliminate motorized use to protect Park resources and values in the winter, while not leaving adjacent areas unprepared for the consequences of its actions.

Furthermore, the DEIS does not contain a Biological Assessment (BA), by which the US Fish and Wildlife Service can produce a Biological Opinion (BO) on the DEIS and its preferred Alternative. This omission severely hampers the ability of the public to assess and make cogent comments on the various Alternatives, and their effects on threatened and endangered species. It seems that the timing of the letter from the USFWS to the NPS contained in Appendix D (dated July 6, 1999 which grants the NPS 180 days to prepare the BA, in response to the letter from the NPS on May 24, 1999 requesting formal consultation) allows the NPS leniency in preparing the BA before the DEIS was released.

This timing is not acceptable, as the NPS was obligated, by decree of the Settlement agreement on the Fund Lawsuit (dated 9-23-1997), to prepare a BA and request formal consultation with the USFWS. The NPS knew a full year and a half before it requested formal consultation that it was bound to do so. This is unacceptable, and a breach of both good faith in the Settlement Agreement, and NEPA process.

Thus it is my contention that a supplemental DEIS (that includes a Biological Assessment) be released prior to the final EIS that allows the public to: make comment on a FULL range of Alternatives, including a true No Action Alternative and non-motorized Alternatives; look at the cumulative effects of motorized use in both winter and summer; look at cumulative effects outside of the Parks created by the need for a change in management prescriptions; analyze cumulative effects on grizzly bear and other threatened and endangered species both inside and adjacent to the Parks as a result of motorized use and removal of bison carcasses as a direct result of control measures taken by the State of Montana by migrating bison using groomed and/or plowed travelways; and analyze the cumulative effects of its winter use policy on the long range viability of the wild bison herds of Yellowstone--the last free roaming herds of buffalo in the lower 48 states.

Absent these procedural deficiencies of the DEIS, it is meaningless to try and analyze the substantive issues that the DEIS presents.

Jim Coefield

The Ecology Center, Inc.

THE ECOLOGY CENTER
Page 1. Re: The DEIS is deficient because it does not contain a "no action" alternative that prohibits all winter use. NEPA does require a "no action" alternative (§1502.14(d)), and the DEIS complies with this requirement. In this case, since motorized use exists, and was sanctioned in the past under existing rules, policies and plans, "no action" is correctly interpreted as the existing management situation. CEQ directly supports this position. Its opinion is that in instances where ongoing programs are being evaluated, "no action" is "no change" from current management direction or level of management intensity. In these instances, CEQ states: "To construct an alternative that is based on no management at all would be a useless academic exercise (Question 3 of CEQ 40 Most-Asked Questions)."
Page 1. Re: The Desired Condition section of the DEIS is fatally flawed because there is no NPS mandate to provide for motorized winter recreation in the winter. NPS agrees – there is no mandate that requires the NPS to provide for motorized recreation; the NPS mandate, as stated in the Organic Act and General Authorities Act, places personal enjoyment and freedom of access in a subordinate role to protection of park resources so they remain unimpaired for the enjoyment of future generations. Personal access may be reflected in the statements of desired condition, but personal access by oversnow motorized vehicles is not a right or a guarantee. Use of off-road motorized vehicles is authorized by Executive Order 11644 (as amended) *Use of Off-Road Vehicles*. The EO allows off-road motorized use only where adverse impacts to park values and natural resources resulting from that use do not occur. The impacts are not, at face value, indisputable, and it will be up to the decision maker to weigh the available information and determine whether effects constitute an impairment. The FEIS will be amended to make this point clear.
Page 1. Re: Cumulative effects analysis must consider the effects of year round motorized use or be in violation of NEPA. NPS disagrees. Under NEPA, future actions can be excluded from the analysis of cumulative effects if the actions are outside the time frame established for the cumulative effects analysis. In this case, the effects of year round motorized use are clearly outside the scope of the analysis.
Page 1. Re: Cumulative effects analysis was insufficient in regards to the effects that changes in winter use in the parks will have on adjacent lands. NPS reiterates, in answer to comments about the lack of facts or certain impact analysis on national forests, that the Forest Service (USFS) is responsible under its cooperating agreement for providing such information to us. NPS has provided the USFS an estimate, or a scenario based on answers from the winter use survey and current use statistics. The USFS should know where its current problems, conflicts, and use levels are (Multi-agency WVUA). The USFS is in somewhat of a better position than NPS to create scenarios for future winter use in national forests near the affected communities. A good indicator would be winter recreation demand trends developed for forest plan analyses, and forest programs that have been developed in anticipation of that. As indicated by the USFS letter, use on national forests (especially off-trail snowmobiling) is increasing each year. USFS should have some effects analysis in place that would be invaluable for dealing with the issue of increased use, regardless of whether the increase is due to displacement from the parks. Relative to cumulative effects analysis, if there are other sources of impact occurring on forest lands that would be additive to the indirect effects of displaced (from the parks) winter recreation, then the USFS should provide that information. The USFS best knows where these sources are and where any increased recreation use would occur – it is unreasonable to expect NPS to create such an analysis without the direct assistance of the USFS. Any information provided by the USFS is incorporated into the FEIS.
Page 2. Re: No analysis of the effects of bison removals on grizzlies or loss of other food sources. These issues are included in the cumulative effects analysis section of the Biological Assessment (BA) for grizzly bears which is incorporated into the FEIS. The Bison Management EIS/Plan addresses these concerns in detail.

Page 2. Re: Insufficient analysis on the effects that increased use of lands on the west side of YNP will have on eagles. The biological assessment to be prepared and published along with the FEIS similarly includes areas of concern for wildlife, including eagles, beyond the park boundaries. NPS has invited the USFS to provide information for this assessment, and for the FEIS.
Page 2. Re: No BA published with the DEIS constitutes a breach of good faith in the Settlement and in the NEPA process. BAs are to be completed within 60 days of the determination of a final preferred alternative. NEPA (CEQ Regulations) state that the preferred alternative does not have to be identified until the FEIS. The statement of preference for one or more alternatives in a draft EIS is discretionary, depending upon whether the agency has a preference at that point (§1502.14(e)). The identification of a preferred alternative in a DEIS should be regarded by the public as extremely tenuous. This is because an EIS is to serve as a means of assessing impacts of proposed agency actions "rather than justifying decisions already made" (§1502.2(g)). The FEIS preferred alternative might be viewed more as a "precursor" decision, which will only become final in a Record of Decision that expresses the rationale for the choice. In any case, it is clear that merely the expression of a preferred alternative in the DEIS does not require a Biological Assessment to be completed in 60 days. A BA has been prepared and submitted to the USFWS.

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December 15, 1999

Mr. Clifford Hawkes
National Park Service, Denver Service Center
12795 West Alameda Parkway
Lakewood, CO 80228
Fax: 303-969-2736

Dear Mr. Hawkes:

On behalf of The Fund for Animals and the organizations listed below, I submit The Natural Regulation Alternative as our response to the *Draft Environmental Impact Statement* (DEIS) for winter use management in Yellowstone and Grand Teton National Parks and the John D. Rockefeller Memorial Parkway. This is in addition to more detailed comments to be submitted by Schubert & Associates on behalf of The Fund for Animals.

We believe the DEIS is woefully inadequate, and that The Natural Regulation Alternative is the only alternative that is consistent with federal law and provides true protection to wildlife, ecology, air and water quality, and serenity and solitude in the parks. The following 16 organizations, representing a combined membership of approximately 1.5 million individuals, have endorsed The Natural Regulation Alternative:

Animal Protection Institute; Association of Veterinarians for Animal Rights; Colorado Grizzly Project; Compassion Over Killing; Doris Day Animal League; Earth Island Institute; Farm Animal Reform Movement; Farm Sanctuary; The Fund for Animals; Great Plains Restoration Council; In Defense of Animals; People for the Ethical Treatment of Animals; Progressive Animal Welfare Society; Psychologists for the Ethical Treatment of Animals; Rocky Mountain Animal Defense; United Animal Nations.

Thank you for the opportunity to submit these comments.

Sincerely,

Michael Markarian
Executive Vice President

"We Speak For Those Who Can't"

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THE NATURAL REGULATION ALTERNATIVE

PRESERVE AND PROTECT YELLOWSTONE AND GRAND TETON NATIONAL PARKS AND THE JOHN D. ROCKEFELLER MEMORIAL PARKWAY

A SENSIBLE, SCIENTIFICALLY SOUND, AND LEGALLY REQUIRED ALTERNATIVE TO RESTORE NATURAL REGULATION, SOLITUDE, AND SERENITY TO THE WINTER MANAGEMENT OF YELLOWSTONE AND GRAND TETON NATIONAL PARKS AND THE JOHN D. ROCKEFELLER MEMORIAL PARKWAY

Prepared by Schubert & Associates for The Fund for Animals

November 1999

SUMMARY:

In August 1999, the National Park Service (NPS) released a Draft Environmental Impact Statement (Draft EIS) for the winter use management of Yellowstone and Grand Teton National Parks and John D. Rockefeller Memorial Parkway (the parks). Instead of providing an objective and legally sufficient analysis of the impacts of winter recreation, particularly snowmobiling and trail grooming in the parks, the NPS hastily prepared a document lacking the substantive and critical analysis required in an EIS. Its alternatives are woefully inadequate; the majority of them, including the preferred alternative, promote an increase in winter use in the parks to the detriment of park wildlife, ecology, air quality, and other natural amenities.

The Natural Regulation Alternative has been developed by The Fund for Animals in response to the government's alternatives. The Natural Regulation Alternative establishes a ban on snowmobiles, snowcoaches, and trail grooming in order to protect and preserve, in perpetuity, the wildlife, ecology, air quality, and natural quiet of the parks. The Natural Regulation Alternative is the only alternative offered to date that is consistent with NPS statutory and regulatory requirements. Furthermore, it allows for winter access to the parks for non-motorized users such as cross-country skiers and snowshoers. And if additional winter access is desirable, it

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offers an innovative method to preserve and promote naturalness within the parks while permitting controlled public use.

BACKGROUND:

In 1916, Congress established the NPS and provided it the responsibility of managing our national parks. Since then, the national park system has grown to include a vast array of ecologically, aesthetically, culturally, and historically important properties in the United States. From the scorching heat of the Mojave Desert to the spectacular vistas of Yosemite, from the geologic wonders of Mammoth Cave and the diversity of the Everglades to the historical significance of Monticello and the Liberty Bell, the NPS is mandated to protect many of America's most spectacular, awe-inspiring, and historically important places.

In establishing the NPS, Congress directed the Secretary of the Interior to "conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." 16 U.S.C. §1 (emphasis added). In establishing this mandate, Congress made clear that national parks were to be managed unlike any other federal lands by preserving them in perpetuity in a natural state. More recently, in 1978, Congress reiterated that the national parks shall not be administered "in derogation of the values and purposes for which these various areas have been established." 16 U.S.C. §1c. Yellowstone National Park, for example, was established to provide for "the preservation, from injury or spoliation of all timber, mineral deposits, natural curiosities, or wonders, within the park, and their retention in their natural condition." 16 U.S.C. §22 (emphasis added).

Unlike other federal lands, timber harvest, hunting, mining, and other uses that would adversely impact natural conditions are not supposed to occur in national parks. Instead, parks are meant to be sanctuaries of naturalness, where wildlife and wildlands are to be managed by natural regulation, and while human use is to be permitted, and even promoted, such use should be limited to ensure the parks remain unimpaired for the enjoyment of future generations. This distinction between preserving nature and permitting public use was made clear in a 1918 letter from Franklin Lane, then-Secretary of the Interior, to Stephen Mather, then-director of the NPS, which stated that "every activity of the Service is subordinate to the duties imposed upon it to faithfully preserve the parks for posterity in essentially their natural state."

Service regulations governing snowmobile recreation also incorporate the preservation mandate. Those regulations require that special rules be adopted to permit snowmobiling in national parks in the lower 48 states and specify that snowmobiles can be permitted "only when their use is consistent with the park's natural, cultural, scenic and aesthetic values, safety considerations, park management objectives, and will not disturb wildlife or damage park resources." 36 C.F.R. §2.18(c). Other regulations prohibit activities and uses that disturb living wildlife from its "natural state," 36 C.F.R. §2.1(a)(1)(I), and permit the park's superintendent to close all or a portion of a park area to "all public use if such action is necessary to protect the environment or scenic values of the park [and to] protect natural resources." 36 C.F.R. §1.5(a)(1).

Despite this clear Congressional and regulatory mandate, many national parks have been subject to management that has been anything but natural. Winter use management, particularly the management of snowmobile use in the parks, is a tragic example of the NPS's blatant misinterpretation of its legal duty to give priority to nature preservation over public use. Indeed, winter use management decisions in the parks are antithetical to the regulatory and statutory mandate to preserve the parks in their natural state. As a result of such inappropriate and illegal decisions, 28 national park units, including twelve national parks, in the lower 48 states currently permit snowmobile use, with the majority of use (and abuse) occurring in Yellowstone National Park, Grand Teton National Park, Voyageurs National Park, and the Pictured Rocks National Lakeshore. At least two national parks — Glacier and Lassen Volcanic — have banned snowmobile use because of adverse impacts and public opposition.

In the early 1970s, as a result of public and political pressure, Yellowstone National Park made what would become a tragic mistake in agreeing to open its gates to snowmobile use. To facilitate this use, Yellowstone developed an extensive trail grooming program, which not only ensured the growth of snowmobiling in the park, but also resulted in adverse impacts to the park's wildlife, particularly its beleaguered bison. While this decision should have been subject to environmental impact analysis under the National Environmental Policy Act, the NPS failed to conduct such an analysis until 1990, nearly twenty years after it permitted snowmobile use of the park. Snowmobile use of Yellowstone increased from a handful in the early 1970s to more than 140,000 during the winter of 1992-93. More than 60,000 snowmobiles entered Yellowstone during the winter of 1997-98, continuing to exact untold damage to the park's wildlife, particularly bison, air quality, and ecology.

Snowmobile use in Grand Teton National Park and the John D. Rockefeller Memorial Parkway began in the 1960s and perhaps earlier. A substantial increase in snowmobile use was documented in the 1970s at the same time that the NPS was developing regulations and guidelines to control such use. Grand Teton and Rockefeller conducted their first analyses of the environmental impacts of snowmobile use in 1980 and 1981, respectively. Those documents contained reference to numerous adverse environmental impacts associated with snowmobile use, but nonetheless proposed to continue to permit snowmobile use in the future. During the winter of 1997-98 more than 4,000 and 2[illegible],000 snowmobiles entered Grand Teton and Rockefeller Parks, respectively.

A comprehensive report documenting the adverse impacts of snowmobiles and groomed trails on the parks and the national forests which comprise the Greater Yellowstone Area was submitted by The Fund for Animals and other groups in 1996. This report and the NPS's failure to respond to the report triggered a 1997 lawsuit spearheaded by The Fund for Animals, challenging the legality of winter use management practices in the parks.

A settlement reached in September 1997 required, among other things, that the NPS prepare a comprehensive EIS on winter use management of the parks. Unfortunately, the Draft EIS fails to provide a comprehensive analysis of the widespread adverse impacts of snowmobiles and groomed trails on the parks' wildlife, ecology, air and water quality, and non-motorized users. More importantly, the NPS has failed to comply with its own statutory mandate by failing to provide a sensible, scientifically credible, and comprehensive alternative to ban snowmobiling and trail grooming in the parks in order to protect and preserve the parks in an unimpaired condition for future generations. Indeed, the NPS explicitly rejected consideration of a no-snowmobiling, no-trail grooming alternative in favor of a collection of alternatives that, for the most part, continue to permit snowmobiling and trail grooming with either no change, increased access, and/or with alterations to snowmobile emission and noise standards. Remarkably, the government's preferred alternative permits continued snowmobiling and trail grooming while promoting increased human use of Yellowstone via access to Old Faithful from West Yellowstone by automobile and tour bus on a plowed road. The government's alternatives, including the preferred alternative, are inadequate because:

- The majority of alternatives continue to permit snowmobiling and trail grooming despite the substantial adverse impacts of these activities on park wildlife, ecology, and air quality.

- Many of the alternatives, including the preferred alternative, would effectively increase the total number of winter visitors to the parks, thereby increasing environmental impacts.

- The NPS has continued to promote and encourage public use at the expense of preserving the parks in their natural condition, as is the NPS's principal mandate.

- The NPS has failed to properly evaluate the substantial direct, indirect, and cumulative environmental impacts of snowmobiling and trail grooming on park wildlife, air and water quality, non-motorized users, and park ecology.

SOLUTIONS:

Since the government has failed to provide a sensible strategy for the management of winter use in the parks that would properly protect park wildlife, air quality, the serenity of the national park experience, or park ecology, *The Fund for Animals* has developed *The Natural Regulation* Alternative to provide an alternative that would protect the parks in an unimpaired condition in perpetuity for the benefit of future generations. The Natural Regulation Alternative calls for:

- A permanent ban on the use of snowmobiles, snowcoaches, and trail grooming in the parks for recreational purposes. Snowmobiling in the parks by park personnel and rescue workers would be permitted only for emergency purposes (i.e., rescue of a human being).

- A strict limitation on road plowing. Plowing will be limited to the road from Gardiner to Mammoth, Mammoth to Cooke City, Highway 26/89 within Grand Teton National Park, and from the Moran Entrance Station to Colter Bay Village, and to facilitate park personnel access to residential properties within the parks (i.e., Mammoth, Colter Bay, Moose). This plowing, however, will be limited to the minimum necessary. Park properties, including residential properties, which would not be required to be accessible if the parks were closed to snowmobile and snowcoach use will be closed for the season.

- If deemed desirable and pending the completion of required planning and environmental impact analysis, the development of an elevated monorail system to permit public access to the parks in the winter. This system would be constructed as expeditiously as possible and would be operable year-round in order to permit continued public use of the parks in a manner that substantially reduces the environmental impact of public access to the parks.

BENEFITS:

The preservation and protection of park wildlife in an unimpaired and natural state. At present, snowmobile use results in significant adverse impacts to park wildlife including: harassment; displacement from important habitat; increased energy expenditures during the critical winter months; increased stress; and alterations in species population dynamics, movements, distribution, habitat use patterns, and predator/prey dynamics. These impacts are unnatural and may adversely impact the survival and viability of individual animals, including federally protected species such as the grizzly bear and gray wolf, and, in time, their populations. While all wildlife species may be impacted, Yellowstone bison clearly are subjected to the greatest impact. Bison use of the groomed trail system has facilitated animal movement within and outside of the park. Bison emigration from the park results in the death of many animals as a result of Montana's antiquated and baseless bison management policies. Bison use of groomed trails has also substantially impacted bison population dynamics, distribution, movements, and habitat use. The use of groomed trails as energy efficient travel routes has permitted the bison population to expand to an artificially high number by reducing winter kill while enhancing productivity, thus increasing the likelihood of bison emigrating from the park. In addition, given the impacts of groomed trails on bison and other ungulates, an increase in the density of ungulates in the thermally-influenced areas of Yellowstone may be adversely impacting the fragile soils and vegetation in these areas. The reduction in vegetation productivity in these areas, which are critical to the survival of ungulates during the most severe winters, could drastically and adversely impact bison and other ungulates in the future.

The establishment of natural regulation as the primary factor controlling wildlife populations and ecological processes in the parks. Though the NPS claims that it is presently managing the parks consistent with its natural regulation mandate, this is not occurring. Indeed, the efforts by the parks to promote and encourage public use, particularly during the winter with the establishment and maintenance of groomed snowmobile trails, has prevented natural regulation to properly function in the parks. Restoring the role of natural regulation in the parks, as is required by federal law, will result in enormous benefits to park wildlife and ecology. Eliminating snowmobiles and groomed snowmobile trails, for example, will reduce the number and rate of bison emigrating from Yellowstone by increasing natural mortality and reducing productivity. The increased proportion of winter kill bison will greatly benefit those animals who rely on carrion for survival, including the threatened grizzly bear, gray wolf, and a variety of other predators and scavengers. The bison population would likely, depending on winter weather severity, decline in size and would presumably reestablish more natural distribution, movement, and habitat use patterns to the overall benefit to park ecology. Other wildlife, such as elk, mule deer, wolves, trumpeter swans, and small mammals would also benefit by: decreasing human-caused harassment; reestablishing natural predator/prey dynamics; reducing energy expenditures as a result of snowmobile disturbance; reducing stress; enhancing natural population dynamics; and reestablishing natural distribution, movement, and habitat use patterns.

Substantially improve air quality in the parks to the benefit of park ecology, wildlife, and humans who use or reside near the parks. In a recent NPS study, snowmobiles were determined to be responsible for nearly all of the air pollution in Yellowstone National Park. Air quality measurements in Yellowstone have regularly violated federal and state air quality standards. The amount of air pollution, generated by the highly polluting two-stroke engines that power most snowmobiles, is excessive. According to a recently released study of air pollution in Yellowstone, on a peak day when 2,000 snowmobiles enter the park, 32 tons of hydrocarbons and 88 tons of carbon monoxide are emitted. Over the course of an entire winter, when more than 60,000 snowmobiles enter the park, that adds up to 1,200 tons of hydrocarbons and 2,400 tons of carbon monoxide. During one winter snowmobiles emit 78 percent of all carbon monoxide and 94 percent of all hydrocarbons released during the entire year, even though cars and other vehicles vastly outnumber snowmobiles. Not only is air quality obviously compromised as a result of such excessive emissions, but snowmobile pollutants also adversely affect human health (including the health of snowmobilers), park vegetation, and, upon snowmelt, the aquatic ecosystem. These impacts would be entirely eliminated by the implementation of The Natural Regulation Alternative. Anything short of a ban, such as a reduction in snowmobile emissions, are appreciated but unwelcome because snowmobiles will continue to adversely impact air quality as well as park wildlife and ecology.

Enhance the serenity and solitude of the national park experience. National parks are supposed to emphasize the value of natural quiet. In Yellowstone, Grand Teton, and Rockefeller, the roar of snowmobile engines destroys the serenity, solitude, and natural quiet throughout a large area in the parks. Natural quiet is part and parcel of natural regulation and preserving natural quiet should be a primary objective of the NPS, not a goal to be discarded in favor of promoting human use of the parks. Those non-motorized users of the parks should have the opportunity to hear the wind whistling through the trees, the far off howl of a wolf, and the subtle sounds of winter. They should not be deafened by the unnatural noise generated by parks overrun with snowmobiles, nor should they choke on the fumes emitted by these machines.

Substantially benefit park ecology. The impacts of snowmobiling and groomed trails extend beyond bison to impact the entire ecology of the parks. The Natural Regulation Alternative would eliminate the adverse impacts associated with snowmobile recreation thereby improving and benefiting the ecology of the parks. These benefits would affect grizzly bears, gray wolves, lynx, wolverines, migratory birds, predators and scavengers, park lands, air and water quality, aquatic species, and would allow for natural ecological processes to be reestablished and to reassert their influence on the health and vitality of the parks.

Permit public use of the parks in a more environmentally acceptable manner in the future. If additional public access to the parks is determined to be desirable, The Natural Regulation Alternative proposes consideration of the development of an elevated monorail system in the parks to facilitate public use in a manner that has substantially fewer environmental impacts than snowmobile and automobile access. An elevated monorail would permit public access to the parks while preserving the parks in a relatively natural state. For instance, an elevated monorail system would not require groomed trails that unnaturally influence population dynamics, movements, distribution, and habitat use patterns for many animals who use the trails as energy efficient travel routes. The monorail could be constructed along existing park roads to avoid any additional land disturbance. Passenger stations could be constructed at each of the existing park attractions (i.e., Old Faithful, Canyon, Fishing Bridge, Flagg Ranch) on previously disturbed areas. Such a system would preclude the use of snowmobiles and automobiles to access the parks, thereby removing the adverse environmental impacts associated with those activities (i.e., pollution, road kills, traffic congestion, noise) and associated management actions (i.e., trail grooming to facilitate snowmobile use), and eliminate the need and cost of road repair and renovation. While such a system would impose new environmental impacts on the parks, those impacts would be far less than existing impacts. Finally, though a monorail system could increase public access to the parks, such use would have to be controlled during all seasons to minimize adverse environmental impacts on park wildlife and park ecology.

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Page 1. See responses to detailed comments from Schubert and Associates. "The primary purpose of an environmental impact statement is to serve as an action-forcing devise to insure that the policies and goals defined in the Act [NEPA] are infused into the ongoing programs and actions of the Federal Government (§1502.1)." "The range of alternatives discussed in an [EIS] shall encompass those to be considered by the ultimate agency decision maker (§1502.2 (e))." The purpose and need for action described in the DEIS is sufficiently broad to act as an action forcing tool. It is within the discretion of the decision maker to set the scope of analysis. Considering that motorized use in the Parks is an existing use, not a proposed use, it is logical to frame the purpose and need in terms that would include that use and facilitate an incremental investigation of the impacts of that use. To do otherwise, and to accept the Fund's assertion, would result in a narrow scope of analysis and one viable alternative relative to motorized use. The settlement agreement that resulted in a need to develop this EIS requires a comprehensive evaluation of winter recreation use – the presumption that only nonmotorized use should be considered in light of policy, law, regulation and existing use, is not appropriate.
Attachment to cover letter. Commenter puts forth a new alternative not evaluated in detail in the DEIS. This alternative and the contention that it would be the only viable alternative consistent with NPS legal mandates are based on premises that NPS does not accept. The completion of the EIS and the final decision are critical to any such determination. The insistence upon natural regulation comes from a misplaced focus on individual animals rather than populations, and it ignores the bigger picture that people, roads and facilities are located in National Parks and will remain so. Hence, as indicated in the EIS, NPS will not analyze in detail an alternative that removes all oversnow motorized use from the 3 park units.

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December 15, 1999

Mr. Clifford Hawkes
National Park Service
Denver Service Center
12795 West Alameda Parkway
Denver, Colorado 80228

Dear Mr. Hawkes,

Attached are the comments of the Greater Yellowstone Coalition on the draft Environmental Impact Statement for Winter Use in Yellowstone and Grand Teton National Parks and the Rockefeller Parkway. Our proposal, *The Citizens' Solution for Winter Access to Yellowstone*, is supported by fourteen groups representing over 2.5 million Americans. These comments are supported by the Natural Resources Defense Council, The Wilderness Society and the Wyoming Outdoor Council.

The examination of how best to manage winter use in Yellowstone, Grand Teton and the Rockefeller Parkway has been a long time coming. Uses, such as snowmobiling, have grown in an uncontrolled manner for over thirty years with insufficient scrutiny of environmental impacts to the parks or the affect on visitor experience.

As we document in the attached comments, the proposed alternative developed by the Park Service for managing winter use in these three park units does not comply with the laws or regulations governing the national park system. Nor does it assure that winter visitors will experience these parks' unique winter values.

The Greater Yellowstone Coalition, together with more than a dozen conservation organizations representing over 2.5 million Americans, has devised a different vision for the future of winter use in Yellowstone and Grand Teton National Parks. *The Citizens' Solution for Winter Access to Yellowstone* assures safe and affordable access to the parks by all Americans, not just those able to ride a snowmobile. Our solution affords access to the park to equal numbers of visitors while achieving a 90 percent reduction in vehicle use in the park. It also dramatically reduces air, water and noise pollution and impacts to park wildlife.

The Citizens' Solution has earned the support of people from every state in America and from numerous national and regional newspapers. They realize that, in an increasingly crowded world, we need to do everything in our power to free our national parks of the problems that plague our cities: inescapable air and water pollution, artificial noise and traffic congestion.

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If we are to ensure that Americans today and in the future will be able to experience Yellowstone and Grand Teton National Parks and their fragile winter values on nature's terms, the Park Service must abandon its preferred alternative and adopt a plan such as *The Citizens' Solution*.

Sincerely,

Mike

Mike Clark
Executive Director

COMMENTS OF The Greater Yellowstone Coalition, Natural Resources Defense Council, The Wilderness Society and Wyoming Outdoor Council

on the
WINTER USE PLAN DRAFT EIS for
YELLOWSTONE AND GRAND TETON NATIONAL PARKS AND JOHN D. ROCKEFELLER JR. MEMORIAL PARKWAY

Hope Sieck, Associate Program Director
December 15, 1999

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Attachments

Attachment A. The Citizens' Solution for Winter Access to Yellowstone.
Attachment B. Editorials on Winter Use.
Attachment C. Map of noise penetration from snowmobiles into Yellowstone National Park. Prepared by the National Parks and Conservation Association.
Attachment D. Map of noise penetration from snowmobiles into Yellowstone National Park. Prepared by Bluewater Network.

"Transportation is the crosswalk between our mission to preserve precious resources and our desire to provide an opportunity for the public to enjoy these resources in a manner that will leave them unimpaired. Transportation can be the problem or it can be the solution."
-NPS Director Robert Stanton

I. Introduction

The Greater Yellowstone Coalition (GYC) has been significantly and actively involved in Yellowstone, Grand Teton and Rockefeller Parkway winter use issues since the organization's inception in 1983. We have participated in previous planning processes including the 1990 Winter Use Plan, the Greater Yellowstone Coordinating Committee's Winter Use Visitor Management Assessment, and the Winter Road Closure EA. Many of our members visit the parks in winter and participate in a variety of activities including skiing, snowshoeing, viewing wildlife and other park resources, and enjoying the stillness and natural quiet.

After careful examination, GYC has determined that the National Park Service's (NPS) preferred alternative B is inadequate and, if implemented, will not protect park resources as required under guiding legislation and regulation. Furthermore, the proposed "adaptive management" approach found throughout the DEIS would delay important management decisions, put off setting thresholds to measure impacts against, and invariably require additional NEPA processes before any actual management to reduce existing impacts can occur. Instead of putting off important decisions, the parks must set thresholds for impact, devise monitoring methodology to determine impacts and follow through immediately on management measures to eliminate or mitigate impacts.

The National Park Service is facing challenges of increased visitation and potential or existing resource impairment system-wide. In response to these challenges, a series of national parks, including Denali, Grand Canyon, Yosemite, Arches and Zion, have implemented, or are considering implementation of, mass transit systems and/or visitor level limits. In order to accommodate ever-increasing visitor numbers in the next century, parks must identify modes of visitor access which do not endanger precious park natural resources or impair the quality of visitor experience.

The Park Service has fallen short of its guiding laws and regulations in crafting the Winter Use DEIS preferred alternative for Yellowstone and Grand Teton National Parks. These parks deserve an innovative, creative solution for winter visitor access modeled after the state-of-the-art mass transit approaches utilized in other parks. To fulfill the spirit and intent of the laws enabling and directing these and all parks, an access system is necessary which does not damage resources, disturb visitors or stress wildlife. necessary. The necessity of such a shift in winter park management is underscored by current challenges to snowmobiling in national parks, such as the Bluewater Network's petition to ban snowmobiles from all park units and by the ongoing GAO study investigating snowmobile impacts and appropriateness as a use

In an effort to craft a solution which protects the parks' resources while providing visitor access, GYC and other regional and national groups representing over 2.7 million Americans developed *The Citizens' Solution for Winter Access to Yellowstone*. It provides a reasonable and implementable system of winter visitor access to the park which will best protect resources and fulfill agency legal obligations and policy requirements. The Citizens' Solution is supported by a broad cross-section of park users, all of whom believe that winter visitation should be permitted in a manner which least compromises precious park resources.

II. Past Mistakes, Present Problems and Future Opportunities

The history of winter use in Yellowstone is an egregious example of uses and impacts being permitted prior to any NEPA public decision-making process. The absence of impact analysis and public involvement for decades was perpetuated by a series of park superintendents who chose to ignore mounting evidence demonstrating deleterious effects of snowmobiles on park resources. The failure of past leaders to act on available information and to require collection of critical data has left Yellowstone in a difficult situation.

A. History of Snowmobile Policy

Yellowstone first allowed visitors to access the park on motorized oversnow vehicles in 1949. Since then, winter visitation has grown, peaking at 143,000 in the winter of 1993-4. Snowplanes were the first method of oversnow transportation used in the park, until snowcoaches were introduced in 1955. They first entered the park in 1963. In the meantime, elected officials and Chambers of Commerce were calling for the park to plow roads in the winter, to allow for more visitors to enter. The Director of the National Park Service responded to this ongoing pressure in 1967 by stating that the form of transportation in winter should be that which is most appropriate to the park, and that oversnow visitation was the appropriate form of visitation in Yellowstone.

Over the years, snowmobile use has grown unchecked and become the dominant form of oversnow access to the two parks. Snowmobile visit numbers grew from 1,000 machines in 1963-4 to 30,000 machines in 1973-4. In 1972, the National Park Service Regional Director in Denver asked all parks to take public comment to devise winter use plans. Glacier National Park held public hearing and noted a variety of problems caused by snowmobiling, including air and noise pollution, wildlife displacement, and conflicts with other park users. For these reasons, and a strong public sentiment against disrupting the quiet and beauty of Glacier with snowmobiles, the park decided to ban them. Other parks including Yosemite, Sequoia/Kings Canyon and Lassen National Parks responded to public opinion by eliminating snowmobiles in the same period.

The superintendent of Yellowstone, however, did not follow this directive to take public comment and assess the impact of snowmobiles on park resources. Meanwhile, complaints from visitors and park rangers about air and noise pollution grew commonplace and the first studies documenting adverse effects to wildlife from snowmobile use were completed. The Superintendent himself acknowledged that snowmobiles were "a very disturbing factor for those who are attempting to enjoy the peace and quiet of the winter wilderness."

In spite of this statement, he did nothing to control the use of snowmobiles in the park. Upon his retirement, he was awarded the International Snowmobile Industry Association's first International Award of Merit for his "sincere dedication to the improvement of and advancement of snowmobiling in the United States." The next superintendent of Yellowstone allowed further expansion of snowmobiling in the park despite ongoing concerns about air and noise pollution and wildlife impacts. He, too, received the International Award of Merit from the International Snowmobile Industry Association.

The next superintendent served from 1983-1994 and saw winter use double. In 1989 Yellowstone Park published a report which described the lack of ongoing research on current and potential impacts of winter use in the parks. Subsequent documents and plans did little to establish or change policy, address previous concerns, or initiate research into impacts of winter use. In 1995, snowmobile emissions at the West Entrance exceeded Clean Air Act limits. Then Superintendent Barbee left Yellowstone to assume the directorship of all national parks in Alaska. In the late 1990s he and his staff drew up regulations to ban snowmobiles from Denali National Park. When asked in an interview why such action was taken, Barbee replied that "we don't want Denali to become another Yellowstone" (Yochim, 1998).

III. The Citizens' Solution for Winter Access to Yellowstone

The Citizens' Solution was designed around two main assumptions; 1) visitors should be allowed to experience the splendors of the parks in winter; and 2) visitor access should in no way impair, disturb or otherwise detract from those very resources which visitors are traveling to see, hear and experience.

In addition to these assumptions, in order to adhere to the Park Service's legal mandate requiring preservation of natural resources for future, the following principles must guide winter management:

- Air and water quality must be protected and maintained at the highest levels possible.
- The stillness and natural sounds of Yellowstone and Grand Teton in winter must be guarded from degradation.
- Wildlife must be protected during the critical winter season.

The Citizens' Solution for Winter Access to Yellowstone strikes a balance between protecting natural resources and insuring visitor access.

The Citizens' Solution crafts a new solution that protects the parks' natural values, while providing visitors with safe, efficient and affordable access to quality recreational and educational experiences. *The Citizens' Solution* will:

- Create a visitor transportation system that preserves the winter character of the parks.
- In Yellowstone, institute a group travel system of "snowcoach only" access. A snowcoach only system would reduce the number of vehicle miles traveled by 90%. Eliminating individual mechanized vehicles will reduce air and noise pollution and minimize human/wildlife interaction, protecting the health of wildlife and people.
- Close Yellowstone's east entrance road where inappropriate and expensive avalanche control technologies are used to maintain recreational vehicle access.

- In Grand Teton, discontinue the Continental Divide Snowmobile Trail, while allowing continued automobile access.
- Require a winter carrying capacity study for the parks in order to strike a balance between protection of park resources and quality visitor experience.
- Limit off-trail backcountry use by skiers and snowshoers in critical wildlife habitat.
- Encourage further research on the needs of wildlife wintering in Yellowstone and Grand Teton.

A. Components of *The Citizens' Solution*

Access

Americans should have the opportunity to access Yellowstone Park, but winter presents a unique challenge. People who choose to visit Yellowstone in winter do so expressly to enjoy the park in its natural winter state, typified by stillness and quiet. The use of individual snowmobiles destroys the natural winter attributes of the parks. Transportation should be provided which is in harmony with winter in the parks. Plowing the road into the park, as suggested in the preferred alternative, directly conflicts with the visitors' desire to see Yellowstone naturally in winter as it would create high snow berms which would hamper views and prevent the unique oversnow experience Yellowstone offers.

Group transportation which minimizes noise, air pollution, and trip frequency while maximizing educational opportunities makes the most sense for Yellowstone in winter. Group travel offers the best opportunity the Park Service has to protect Yellowstone's resources for future generations while still allowing visitor access in winter. The Citizens' Solution supports the use of snowcoaches as the sole mode of recreational travel on park roads in winter. These vehicles hold 10-15 people and provide opportunities for on-board education by drivers, as well as sharing among families, friends and fellow visitors. Snowcoach routes and timing should be synchronized like municipal transit systems to allow individual trip planning and quiet periods for exploring between stops. Warming huts should be added to the route between West Yellowstone to Old Faithful at selected points to facilitate visitor exploration of geyser basins and other features at snowcoach stops. A transportation alternative which fosters community and education among park visitors while allowing for appreciation of the natural winter state is the most sensible option for these sensitive and unique areas.

Similar transportation alternatives are in place in Denali, and will soon be in place in Grand Canyon, Zion and Yosemite National Parks. The NPS should be a leader in promoting clean, quiet and affordable modes of group transportation which are protective of the natural qualities of the parks. Yellowstone is a natural place to look next for expansion of the alternative transportation program already taking place in the Park Service.

Affordable access is a cornerstone of our national park system. Winter visitation to Yellowstone and Grand Teton, is by its nature, more costly than summer travel. There is room, however, to make snowcoach trips more affordable. Funds to do so may come from savings accrued from altered winter management such as closed fuel dumps and less frequent grooming, the fee user program or other park budget appropriations, or federal and state grants which support cleaner transportation systems.

Economic Opportunities

The economic well-being of gateway communities is tied to the health of the parks. Americans are drawn to the parks in winter by the exceptional experience a winter visit provides. Unfortunately, many visitors have chosen not to return to Yellowstone in winter because of the noxious, loud experience which snowmobile use creates. The Citizens' Solution will provide a balanced experience for visitors by providing them motorized access to the parks in the least polluting, quietest way and presents the opportunity for economic diversification in surrounding communities.

In order to ease the economic transition for business owners in gateway communities, Park Service contracts for snowcoach operations should be offered preferentially to locally owned businesses who have relied on snowmobile business in the parks. Small Business Administration (SBA) loans should be explored and the Park Service should facilitate when possible. The demand to see the parks in winter will not disappear; marketing strategies can be adapted to encourage visitation via snowcoaches just as snowmobile rentals were marketed effectively in the past. The gateway communities have weathered many changes in their economies, and the Citizens' Solution would afford the opportunity for healthy economic diversification in these communities, many of which have lost business from a variety of users as snowmobiles took hold as the dominant use (e.g. Pers. comm., Craig Matthews, owner, Blue Ribbon Flies; Pers. comm., Kelli Criner, owner, Freeheel and Wheel, pers.comm.). The snowmobile business will not disappear; popular snowmobiling areas surround the parks. Indeed, the average visitor to West Yellowstone, MT spends only one day of a multi-day visit snowmobiling inside of the park (Pers. comm., David McCray, owner TwoTop Snowmobiles).

Implementation of the Citizens' Solution will provide a much-needed opportunity for diversification in gateway communities. The foundation of healthy economies in surrounding communities is the presence of healthy parks offering a wholesome experience for all members of the public.

Carrying Capacity, Facilities and Services

Yellowstone in winter cannot support an infinite number of visitors. Attempting to will detrimentally affect the parks' natural resources and strain the existing infrastructure. Winter use has grown exponentially in the past three decades, with little scientific data analyzing its impacts to natural resources. Winter use levels should not exceed the previous six years' average until analyses of carrying capacity are conducted. No expansion of winter services or facilities should take place in the ensuing period. With the implementation of group transportation, some facilities, such as fuel dumps at Lake and Canyon, may no longer be needed and could be phased out.

Roads and area closures

Ongoing scientific studies are assessing the impacts of road grooming on wildlife movement through the parks in order to make any decisions regarding road closures. Further studies, including those involving the closure of roads necessary for collection of control data, are needed. We support the interim use of all currently used roads and areas in the parks pending results from scientific studies of wildlife use of groomed and un-groomed areas, with the following exceptions:

- The east entrance to the Yellowstone Park should be closed to oversnow vehicles due to the inappropriate use of avalanche control techniques to maintain this corridor for a few motorized recreational vehicle access.
- In Grand Teton National Park, the Continental Divide Snowmobile Trail (CDST) should not travel across National Park Service administered lands.
- The Potholes area of Grand Teton should be closed to motorized use.
- No new permits for snowplanes should be issued and as existing permitees give them up, the permits should be retired.
- No snowmobile use will be permitted in Grand Teton National Park except for administrative use and where necessary to access private residences. In Yellowstone National Park, snowmobiles may only be available for park administrative use.
- Areas of critical winter habitat in the backcountry should be closed, or limited to skiing and snowshoe use on designated trails.

Through *The Citizens' Solution*, we propose a system of winter use that protects natural resources while providing affordable public access to the parks in their most fragile season. Each component of *The Citizens' Solution* was selected with the goal of complying with park laws and regulations and steering the parks back on a course of resource preservation and visitor enjoyment. The components of *The Citizens' Solution* are reflected in the various alternatives within the Draft EIS and adoption would therefore require no additional analysis.

In the following sections on impacts to park resources and visitor experience, the failure of the preferred alternative to comply with law and regulation will be discussed. Then, *The Citizens' Solution* will be shown to provide a means for the parks to meet the spirit and intent of salient laws, regulation and policy.

IV. Snowmobiling Impacts on Park Resources

A. Air Quality

1. Existing Problems and Failure of the Preferred Alternative

The preferred alternative, Alternative B, proposes to establish an advisory committee to phase in and implement emission standards for snowmobiles. Under Alternative B, "strict emissions requirements would be required for all oversnow vehicles" by the winter of 2008-2009. "These requirements would reduce snowmobile emissions by a minimum of 70% of hydrocarbons, 40% of CO and 75% of particulates." (DEIS, Vol.1, p.202).

The failure to act immediately to halt snowmobile emissions violates the parks' duty under the Clean Air Act and National Park Service Management Policy. Snowmobile emissions at levels damaging to public and employee health and degrading to the parks' air quality have been occurring for years. Carbon monoxide levels in the park currently exceed NAAQS and will continue to exceed levels. Nothing in the preferred alternative would immediately halt Clean Air Act NAAQS exceedences. This directly violates NPS responsibility to ensure the quality of Class I areas.

Nearly all snowmobiles are powered by two-stroke engines. These engines create dangerous levels of airborne toxins including nitrogen oxides, carbon monoxide, ozone, particulate matter, aldehydes, 1,3 butadiene, benzenes, and extremely persistent polycyclic aromatic hydrocarbons (PAH). Several of these compounds are listed as "known" or "probable" human carcinogens by EPA. Benzene, for instance, is a "known" human carcinogen. And several aldehydes including butadiene are classified as "probable human carcinogens." All are believed to cause deleterious health effects in humans and animals well short of fatal doses (EPA 1993).

Two-stroke engines also discharge 25-30% of their fuel mixture, unburned, directly into the environment. Unburned fuel contains many toxic compounds including benzene, toluene, xylene and the extremely persistent suspected human carcinogen MTBE. Two-strokes are one of the largest unchecked sources of pollution nationwide. Charles Emmett, an engineer with the California Air Resources Board (CARB), says that snowmobiles are "extremely, extremely dirty compared to anything else ... [s]nowmobiles are the worst there is" (McMillion 1994).Extensive information is available on two-stroke engine emissions and the direct impacts to human health and air quality.

Current air quality degradations within the parks warrant strong action, which is not adequately reflected in the preferred alternative. The use of two-stroke engines, in the form of recreational use of snowmobiles, in national parks violates the NPS mandate to protect parks' natural resources. For good reason, snowmobile use is being examined by the National Park Service system-wide and by the General Accounting Office.

During the winter of 1998-9 Yellowstone saw 63,000 snowmobiles enter the park, with nearly 54,000 visitors traveling on the corridor between West Yellowstone and Old Faithful (Flores and Maniero, 1999).

Snowmobiles are exponentially more polluting than automobiles for several reasons:
1) Every stroke of the piston in a two-stroke engine is a power stroke. Within a fraction of a second, the exhaust is vented and new gas, oil and air are brought in. Because both the exhaust and intake port are open at the same time, *25-30% of the raw fuel and oil is wasted and enters the environment within the exhaust.*
2) Every winter in Yellowstone National Park, *snowmobiles dump more than 50,000 gallons of unburned fuel into the snowpack.* This is the equivalent of five tanker trucks of fuel spilling their loads in the park each winter.
(Sources: Montana Department of Environmental Quality, 220,000 gallons of fuel were sold for snowmobile use within the park in the winter of 1995; Environmental Protection Agency, two stroke engines emit 25-30% of fuel unburned out the tailpipe in exhaust.)
3) One snowmobile emits *225 times more carbon monoxide* than an automobile.
One snowmobile emits *1000 times more hydrocarbons* than an automobile.
(Sources: National Park Service, snowmobile numbers and duration of visit from West Yellowstone to Old Faithful; International Snowmobile Industry Association, emissions levels and horsepower, Environmental Protection Agency, load factor, automobile emissions levels)

4) The *highest carbon monoxide levels in the nation* were recorded at Yellowstone's West Entrance during winters in the 1990s. The Park Service must pump fresh air into entrance booths to curb employee headaches, dizziness, throat irritation and nausea.
(Source: Montana Department of Environmental Quality; Environmental Protection Agency; National Park Service)

Snowmobiles destroy air quality everywhere they are used. Even a small group of snowmobiles produce extremely high levels of pollution. According to CARB emissions data, one hour on a two-stroke engine used by most snowmobiles and jet skis, produces more smog-forming pollution than a modern car creates in one year.[1] Every weekend in Yellowstone, snowmobiles at Old Faithful alone create more than a year's worth of park-wide automobile pollution.

The Montana Department of Environmental Quality reports that the 1,000 snowmobiles which enter West Yellowstone on a busy day may release "a volume of emissions similar to hydrocarbon emissions of 3,000,000 cars" (Haines 1997). Extrapolating from more conservative CARB data, snowmobiles emitted an estimated total of 13,860,920 pounds of hydrocarbons during the winter of 1997/98 compared to only 203,293 pounds of hydrocarbons emitted by automobiles touring Yellowstone in 1997. Thus, during the 1997 winter season, snowmobiles left the equivalent of 68 years of YNP auto pollution.[2] Total Comparison: 13,860,920/203,293 = 68 years equivalent.

Dangerous levels of carbon monoxide (CO) and particulate matter (PM) are a primary concern. CO is extremely dangerous to humans (discussed below), and particulate matter is a recently confirmed human carcinogen by the Environmental Protection Agency. Snowmobiles emit dangerously high levels of carbon monoxide. A study conducted for the National Park Service in 1997 concluded that a single snowmobile produces 500-1000 times more carbon monoxide than a 1988 passenger car (Fussell-Snook 1997). Notably, comparisons to a current model-year passenger vehicle would increase this figure significantly.[3]

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[1] Based on current CARB data: (http://www.arb.ca.gov); January 5, 1999.

[2] Snowmobile emissions: [72,834 snowmobiles entered Yellowstone during the winter of 1997/98] x [5 hours average ride] x [216 grams per horsepower-hour of snowmobile hydrocarbon (HC) pollution (CARB)] x [100 average horsepower] x [0.8 load factor] = 6, 292,857, 600 grams of HC pollution. When converted to pounds, snowmobiles emitted 13,860,920 pounds of HC pollution into Yellowstone National Park during the 1997/98 winter season.

Automobile emissions: [961,409 automobiles entered Yellowstone in 1997 x [120 miles average distance] x [.8 grams per mile of automobile HC emissions] = 92,295,264 grams of HC pollution. When converted to pounds, automobiles emitted 203,293 pounds of HC pollution into Yellowstone National Park in 1997.

[3] Some modern cars emit only .12 grams/kW-hr as compared to CARB estimates of 1078 grams/kW-hr for snowmobiles. As a result, some snowmobiles produce almost 9,000 times more carbon monoxide during a given period than a modern car.

Due to the popularity and proliferation of snowmobile use in West Yellowstone, PARK SERVICE conducted air quality studies under various conditions at the West Entrance. The park used stationary and mobile testing apparati in 1995 and 1996, focusing on carbon monoxide (CO) and particulate matter concentrations at ground level. Preliminary results indicate that CO levels exceed federal and state ambient air quality standards at certain times.[4] In fact, a reading of 36 ppm in 1996 was the highest concentration recorded for CO nationwide, including cities with notoriously high CO levels such as Los Angeles and Denver. Results from both years demonstrate a positive correlation between snowmobile density and high CO levels.

2. Human Health Risks Associated with Carbon Monoxide and NPS Responsibility to Protect Public and Employee Health

The blue haze found along snowmobile corridors, trailheads and gas stations contains not only dangerous levels of airborne toxins, but can lead to the formation of additional ground level ozone from the photochemical reaction of released nitrogen and hydrocarbons. Health risks associated with exposure to smog and nitrogen include respiratory complications such as coughing, chest pain, heart problems, asthma, concentration lapses and shortness of breath. Elderly individuals and children are particularly sensitive to ground level ozone and nitrogen.

In Yellowstone, concern about public health and excessive snowmobile pollution were issues raised in over 1,200 snowmobile complaint letters received by the park in 1993 and 1994. As a result, Yellowstone began to study snowmobile emissions and soon found that CO and PM concentrations were high enough to cause health and air quality concerns in West Yellowstone, along the snowmobile trail to Old Faithful, and in the parking log at Old Faithful (PARK SERVICE Air Quality Division 1995). In addition to adverse pollution impacts on visitors, Yellowstone has been forced to enclose ranger booths at its West Entrance to protect rangers from dizziness, nausea, fatigue, headaches, and breathing problems. Filtered air is pumped into entrance kiosks where rangers have reported difficulty counting change. Park visitors have reported tasting the visible haze which surrounds busy entrances and trailheads.

Carbon monoxide is particularly dangerous because it binds to the hemoglobin in blood (forming carboxyhemoglobin) and renders hemoglobin incapable of transporting oxygen (Snook-Fussell 1997). Elevated levels of carboxyhemoglobin can cause neural-behavioral effects at lower levels (2-3 percent), headaches and fatigue (10 percent), and respiratory failure and death at higher levels. And the general consensus among medical professionals is that the health risk from CO increases at high altitude -- a risk exacerbated by richer fuel mixtures common at higher elevations. CO is particularly hazardous during pregnancy, and to the elderly, children, and individuals with asthma, anemia or other cardiovascular disease (EPA 1991; 1994).[5] The National Ambient Air Quality Standards for CO of 35 ppm for 1 hour and 9 ppm for 8 hours were established to keep blood levels of carboxyhemoglobin below 3 percent. Notably, some scientists have criticized these standards because of evidence of adverse health effects even at these levels (Watson 1995, Greek and Dorweiler 1990).

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[4] Federal standards for CO are 35 and 9 parts per million for a one and eight hour average, respectively, 40 CFR § 50.8(a)(1)(2). State standards differ for Montana and Wyoming. In Montana, the CO standards are 23 and 9 ppm for the 1 and 8 hour averages, respectively, while Wyoming's standards are identical to those of the federal government.

Snowmobilers, rangers and other park visitors are exposed to dangerous levels of CO. In Grand Teton National Park, Fussell-Snook (1997) measured the amount of CO emitted from a snowmobile on a Park trail under steady-state conditions.[6] An average of 9.9 g/mile (99 g/hr) to 19.9 g/mile (795 g/hr) of CO was emitted by one snowmobile traveling from 10 to 40 mph. By comparison, an automobile emits 0.01 to 0.04 g/mile of CO under steady-state conditions, or approximately 1,000 times less than a snowmobile. The average CO measurements for a single snowmobile, recorded at different speeds and distances (25-125 feet), ranged from 0.5 - 23.1 ppm. The Montana state one-hour human exposure limit for carbon monoxide is 23 ppm.

It is important to reemphasize that these measurements were based on a single snowmobile only, during steady-state conditions. Unfortunately, snowmobiles travel in packs of 2-25 units for sustained periods of time, and often accelerate over hills and banks. It is therefore clear that typical human exposure to CO is of a much greater magnitude, and represents a very significant level of toxic pollution.[7] The results are particularly alarming for rangers and recreationists at trailheads, gas stations, and park entrances, where one hundred snowmobiles can create the equivalent carbon monoxide of more than 100,000 cars.[8]

As a federal employer, the NPS has the responsibility under OSHA and regulation to protect employee health. The Park Service also must perpetuate conditions in the best interest of public health. The permission of snowmobile use in the parks and concomitant impacts to air quality endanger park visitors with respiratory and other ailments and chemical sensitivies. The Park Service must provide a health environment for visitors; current snowmobile use precludes the parks' ability to ensure a clean, healthy environment for visitors and a healthy workplace for employees, as required by law.

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[5] For a summary of the human health effects of snowmobile pollutants, including carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter, See EPA (1994).

[6] Snowmobiles emit more pollutants when accelerating. The steady-state conditions in this study, therefore, represent a "best case" emission volume (Fussell-Snook 1997).

[7] In addition, the impact of CO exposure increases with increasing altitude, especially for unacclimated individuals (National Commission on Air Quality 1980). Thus, because much snowmobile use occurs at higher altitudes, risks to human health are even greater.

[8] Based on the aforementioned correlation between cars and snowmobiles in terms of carbon monoxide emissions.

3. Legal and Policy Requirements

There is no scientifically legitimate or legally defensible reason to wait another decade to improve public health and air quality within the Class I airsheds of Yellowstone and Grand Teton national parks. The Clean Air Act states that the National Park Service, as a federal land manager, has "an affirmative responsibility to protect air quality related values, including visibility, from the adverse effects of air pollution in areas that are designated as "Class I". There are 48 Class I areas that are part of the National Park System. Congress intended that these areas be afforded the greatest degree of air quality protection and specified that only very small amounts of air quality deterioration from new or modified major stationary sources be permitted. One purpose of this "prevention of Significant Deterioration (PSD)" program is "to preserve, protect, and enhance [emphasis added] the air quality in national parks." (42 U.S.C. §7401 *et seq.*) "These policies require managers to assume an aggresssive role in promoting and pursuing measures to safeguard air quality and related values from the adverse impacts of air pollution" (Flores and Maniero, 1999). National Park Service Management Policies are clear that "[I]n cases of doubt as to the impacts of existing or potential air pollution on park resources, the Park Service will err on the side of protecting air quality and related values for future generations." (NPS Air Resource Management Policy).

Exceedences of Clean Air Act standards place a stronger onus on park managers to restore air quality. National Park Service areas that do not meet the National Ambient Air Quality Standards (NAAQS) or whose resources are already being adversely affected by current ambient levels require a greater degree of consideration and scrutiny by NPS managers. Areas that do not meet the NAAQS for any pollutant (of the six criteria pollutants) are designated as non-attainment areas. Section 176 of the Clean Air Act states:

> No department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve, any activity which does not conform to an [state] implementation plan... [T]he assurance of conformity to such a plan shall be an affirmative responsibility of the head of such department, agency or instrumentality. (42 U.S.C. 7401 §176)

Furthermore, the Clean Air Act "requires superintendents to take actions consistent with their affirmative responsibilities to protect air quality related values in Class I areas." "Air quality related values refer to elements of a Park environment which are sensitive to air pollution and may include vegetation, visibility, water quality, wildlife..." (NPS Policies at 4:17) When there is a question as to the impacts of existing or potential air pollution on park resources, NPS Policies require the NPS to "err on the side of protecting air quality..." (NPS Policies at 4:17)

NPS Policy seeks to perpetuate the best possible air quality in parks "because of its critical importance to visitor enjoyment, human health, scenic vistas, and the preservation of natural systems and cultural resources" (NPS Policies at 4:17) The NPS is mandated through both its own 1916 Organic Act (16 U.S.C. §1), the Clean Air Act (42 U.S.C. §7401 et seq) and Executive Order 12088, as amended, to protect air quality in National Parks.

This Executive Order requires the head of each executive agency to ensure that "all necessary actions are taken for the prevention, control and abatement of environmental pollution (at §1-101) to submit a plan for the control of environmental pollution to the OMB annually at §1-401, and to "ensure that sufficient funds for compliance with applicable pollution control standards are requested in the agency budget." Id at §1-501.

Our first national park and its magnificent neighbors have seen considerable impact to their air quality and should not serve as a testing ground for as of yet unproven new snowmobile technologies. Promises of future improvements by the snowmobile are not adequate safeguards for managing these parks. Air quality exceedences are documented (MT DEQ, 1998-1999; NPS, 1995-1999; Flores and Maniero, 1999) and will continue to be reported, and deterioration of park air quality will continue, until recreational snowmobile use is removed from the park and a group transportation system using the cleanest oversnow vehicles available, snowcoaches, is implemented.

4. Solutions

The Citizens' Solution proposes a group travel system using snowcoaches only, as proposed in the DEIS' Alternative G. The availability and current use of four-stroke oversnow vehicles in the parks makes any utilization of two-stroke machines indefensible. Furthermore, the existence of and current use of mass transit oversnow vehicles, in the form of snowcoaches, makes continued allowance for individual machines unnecessary. The Park Service nation-wide is seeking opportunities to reduce pollution and lower the numbers of vehicles needed to provide visitor access. Yellowstone is fortunate to have a system of mass transit oversnow access already in place. The use of only snowcoaches would significantly improve air quality (see DEIS impact sections for Alternative G), provide the same number of visitors access, and reduce the number of vehicles and vehicle miles traveled by 90 per cent.

Under the Clean Air Act and NPS policy, the Park Service must mitigate or eliminate impacts to air quality currently arising from snowmobile use in the park. No means currently exist to mitigate these effects. Fortunately, the means to eliminate them do exist. Four-stroke machines for oversnow access are currently used in the park in the form of snowcoaches; this mode of access must replace that of two-stroke motorized access. Snowcoaches accomplish the desired conditions the Park Service seeks in this planning process-- air quality improvement, noise reduction and reduction of vehicle numbers.

Under the Clean Air Act, Organic Act and NPS Management Policy, the excessive pollution of two-stroke engines is clearly prohibited. Fortunately, the parks have a four-stroke mode of access available and in place in the parks: snowcoaches.

B. Noise Pollution and Natural Quiet

1. Existing Problems

The opportunity to experience natural sounds and silence is rare in our modernized world; one of the last refuges to experience natural sounds is in our national parks. Current use of snowmobiles in the parks undermines the opportunity to have natural quiet as a part of the national park experience. Snowmobiles emit extreme levels of noise at higher frequencies than automobiles. This combination makes snowmobile noise quantitatively and qualitatively different from other vehicle use in the parks. The Park Service must do everything it can to reduce noise levels in parks to prevent the intrusion of urban noises into park lands.

In addition to adeversely effecting visitor experience, snowmobiles noise, according to the Environmental Protection Agency, also has detrimental impacts on wildlife. Snowmobile noise acts as a physiological stressor producing changes similar to those brought about by exposure to extreme heat, cold, pain, etc. (EPA 1971). The EPA states that:

> Clearly, the animals that will be directly affected by noise are those capable of responding to sound energy and especially the animals that rely on auditory signals to find mates, stake out territories, recognize young, detect and locate prey and evade predators. Further, these functions could be critically affected even if the animals appear to be completely adapted to the noise (i.e., they show no behavioral response such as startle or avoidance). Ultimately it does not matter to the animal whether these vital processes are affected through signal-masking, hearing loss, or effects on the neuro-endocrine system. Even though only those animals capable of responding to sound could be directly affected by noise, competition for food and space in an ecological niche appropriate to an animal's needs, results in complex interrelationships among all the animals in an ecosystem. Consequently, even animals that are not responsive to or do not rely on sound signals for important functions could be indirectly affected when noise affects animals at some other point in the ecosystem. The "balance of nature" can be disrupted by disturbing this balance at even one point (EPA, 1971).

Furthermore, the EPA anticipates that the consequences of a loss of hearing ability could include a drastic change in the prey-predator situation. It states:

> The animal that depends on its ears to locate prey could starve if auditory acuity decreased, and the animal that depends on hearing to detect and avoid its predators could be killed. Reception of

> auditory mating signals could be diminished and affect reproduction. (Masking of these signals by noise in an area could also produce the same effect). Detection of cries of the young by the mother could be hindered, leading to increased rates of infant mortality or decreased survival rates.

Finally, the EPA raises concerns about the findings of changes in the reproductive organs and sexual function of animals exposed to noise. These impacts, according to the EPA, "should be viewed as possible serious threats to the animal's reproductive capacity.

Although Park Service regulations prohibit snowmobiles if they exceed 78 decibels at 50 feet,[9] 36 C.F.R. §2.18(d)(1), it is not known how carefully or consistently this regulation is enforced. In addition, whether the existing Park Service noise regulations accurately portray the noise generated by snowmobiles is not certain.

In addition, there is no evidence that the Park Service has conducted any studies to determine what impact this level of noise is having on Park wildlife. Even if this regulation was always enforced, this does not mitigate all potential impacts. For example, in Yellowstone National Park snowmobile use is constant, not infrequent. Thus, even at 78 decibels, the continual drone of snowmobile engines may adversely impact the hearing mechanism, behavior, and survival of wildlife.

The DEIS' approach to mitigating snowmobile noise in inadequate in the face of stringent NPS policy regarding natural quiet. The DEIS divides park areas into "foreground", "middleground" and "distant areas" and sets appropriate visitor expectation and sound levels for each. The Parks' rationale for such a system is arbitrary and not adequately supported. It is not in line with existing park policy regarding the value of natural quiet.

2. Policy Requirements and Data Insufficiencies

Natural quiet is also of critical importance in National Parks. Parks "have intangible qualities such as natural quiet, solitude, space, scenery, a sense of history, sounds of nature, and clear night skies that have received congressional recognition and are important components of people's enjoyment of parks." (NPS Management Policies of 1988 (Ch 1:3-4)) Park Service policy is clear:

> The National Park Service will strive to preserve the natural quiet and the natural sounds associated with the physical and biological resources of the parks (for example, the sounds of the wind in the trees or of waves breaking on the shore, the howl of the wolf, or the call of the loon.). Activities causing excessive of unnecessary unnatural sounds in and adjacent to parks...will be monitored and

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[9] This noise level is applicable for snowmobiles manufactured after July 1, 1975. Noise levels for snowmobiles manufactured before 1975 are higher. The regulations on snowmobile noise levels, however, appear to conflict with regulations pertaining to audio disturbances which prohibits the operation of a motor vehicle or motorized equipment in a manner which exceeds a noise level of 60 decibels at 50 feet. 36 C.F.R.§2.12(a)(1).

> action will be taken to prevent or minimize unnatural sounds that adversely affect park resources or values or visitors' enjoyment of them. (Policy at 4:17)

Natural quiet as a resource, "defined as the natural ambient sound conditions…refers to the absence of mechanical noise, but accepts the 'self-noise' of park visitors. "Self-noise' is the noise generated by the visitor- the tread of hiking boots on the trail, the creaking packframes, rattle of pots and pans, talking, etc." (NPS Report on Effects of Aircraft Overflights on the National Park System, 1995 (Report to Congress))p.74) "Preserving natural quiet is an integral part of the mission of the NPS. This is confirmed in law, policy, and the beliefs of NPS managers. (Id at p.76) Unnatural sounds must be monitored in and adjacent to parks, and action must be taken to "prevent or minimize unnatural sounds that adversely affect park resources or values or visitors' enjoyment of them." Id. (Emphasis added). To achieve this standard, "the operation of motorized equipment or sound devices that create unreasonable audio disturbances will be prohibited. Id. (Emphasis added).

> Parks and wildernesses offer a variety of unique, pristine sounds not found in most urban or suburban environments. They also offer a complete absence of sounds that are found in such environments. Together, these two conditions provide a very special dimension to a park experience… Quiet itself, in the absence of any discernible source (especially man-made), is an important element of the feeling of solitude…In considering natural quiet as a resource, the ability to hear clearly the delicate and quieter intermittent sounds of nature, the ability to experience interludes of extreme quiet for their own sake, and the opportunity to do so for extended periods of time is what natural quiet is all about. (p.78) (NPS Report on Effects of Aircraft Overflights on the National Park System, 1995 (Report to Congress))

In developing an approach to preserve natural quiet, the NPS outlined several "important facts." The first two are: " 1. Natural quiet is a resource for preservation within the NPS mandate; and 2. The human auditory system is an excellent mechanism for determining the presence or absence of natural quiet. …". (NPS Report on Effects of Aircraft Overflights on the National Park System, 1995-Report to Congress; p.85).

Despite this strong policy guidance and allowance for the human ear to measure natural quiet, the Park Service has failed to collect useful data on noise pollution in the parks. The data presented appears to be erroneous. Table 42 (p. 192, DEIS) estimates snowmobile noise from a group of 10 machines extending only 4500 feet. This data does not account for cumulative noise effects or individual sensitivities to noise beyond decibel recognition (e.g. effects of different frequencies). The DEIS also sets the natural ambient sounds as high as 30dB. This presumption is made in the absence of any real data concerning natural quiet in Yellowstone National Park. It seems likely that the low-end ambient to be protected and restored in winter is closer to 10-15 decibels. The Grand Teton 1996 noise report by Bowlby and Associates appears to have lacked a systematic approach to define the low-end ambient. Certainly, the methods and equipment to determine low-end ambient ranges are available to the NPS.

Other parks, including Grand Canyon and Everglades, can provide technical guidance and data which the parks can use to design studies appropriate for winter impacts. We encourage the NPS to apply these rich data sources, new technology, and analytical insights to the present Yellowstone analysis of natural quiet. Specifically, we recommend that the Parks conduct 'Percent of Time Audible' studies focusing on snowmobile noise. This type of data is most relevant, as the mere presence of snowmobile noise is the issue, rather than the loudness or proximity of it.

The only existing data on noise pollution in the parks demonstrate that snowmobile noise far exceeds NPS' best guesses, as included in the DEIS. Anecdotal reports document severe degradation of natural quiet up to 20 miles into the backcountry. This penetration distance was clearly not anticipated for by the parks (see Wilderness section), as proposed wilderness was set at one or less miles from the road. Current snowmobile use renders large portions of Yellowstone park unusable by those seeking natural quiet. Yochim (1998) compiled reports of noise penetration up to 15-20 miles into park wilderness. The average distance excluding the 15-20 mile report was about six miles. A recent map(Attachment C, National Parks and Conservation Association, 1999)has shown noise penetration of ten miles into the park. Even with a more conservative estimate of a five mile noise penetration zone (Attachment D, Bluewater Network, 1999), visitors have to go great lengths to experience natural sounds.

3. Solutions

The mode of access utilized by winter visitors must be the most quiet vehicle possible. The Citizens' Solution's proposed snowcoach transit system would eliminate high frequency, loud snowmobile noise. Snowcoaches can be made still quieter by installing muffling devices. Snowcoaches run on alternative power such as electricity should be investigated. The Park Service must commit to the quietest vehicles available. Snowcoaches represent the quietest, currently available motorized access to the parks and numerous possibilities for further noise reduction of snowcoaches exist. Snowcoaches currently can meet current noise standards, and mufflers and other engine types are widely available to upgrade coaches and make them even quieter. Finally, the reduction in overall number of vehicles accomplished by a switch to a mass transit system will result in significant cumulative noise reduction.

C. Water Quality

Snowmobile emissions are deposited directly onto the snowpack of the parks. This snowpack pollution translates directly into pollution of the parks' waters as the snow melts. Snowmobiles each year emit the equivalent of five tanker truck loads onto the snowpack of Yellowstone. The components of snowpack pollution from snowmobile emissions can include toxic compounds such as MTBE (a fuel additive), and polycyclic aromatic hydrocarbons (PAHs) such as benzene, butadiene, xylene, toluene, and formaldehyde. MTBE is a known animal carcinogen and a suspected human carcinogen (Hagemann and Van Mouwerik, 1999). Benzene is a known carcinogen, and formaldehyde and butadiene are classified as probable human carcinogens by EPA (EPA; Adams, 1996). Formaldehyde, benzene and butadiene are thought to harm humans and animals at levels well below fatal doses, and certain PAHs are toxic to aquatic organisms and cause lesions in fish (Adams, 1996). The threats of PAH-contaminated stream and lake sediments derived from run-off are largely unknown, but some experts suspect significant food-chain interactions (Hagemann and Van Mouwerik, 1999). A recent report by the Park Service summarizes the risks to water quality presented by snowmobile emissions onto snow (Hagemann and VanMouwerik, 1999)

1. Polycyclic Aromatic Hydrocarbons (PAHs)

PAHs are by-products of fuel combustion found in high concentrations in unregulated two-stroke emissions. They are particularly hazardous because they are both carcinogenic and mutagenic, and are extremely persistent in the environment. Studies by the Tahoe Regional Planning Agency (1997) have shown that PAHs can remain on the surface of the water, where fish and other species feed on phytoplankton and zooplankton. A nine year follow-up study on the Exxon Valdez spill in Alaska by National Marine Fisheries scientists, to be published in Environmental Toxicology and Chemistry, found that residual oil toxins were not breaking down as rapidly as reported (Heintz et al. 1998). The data, which revealed stunted salmon growth and reproductive problems from PAHs, highlighted the importance of considering the composition of PAHs found in contaminated water. The study also states that previous toxicological studies did not provide sufficient consideration to the persistence of sublethal levels of PAHs, and their effect on long-term species survival and reproduction.

Of further concern, independent scientists and a report funded by the National Marine Manufacturers Association (NMMA) found that PAHs at extremely low levels (parts per trillion) are toxic to zooplankton, and inhibit not only zooplankton reproduction, but also the reproductive success and general growth of fish (Oris et al. 1998, Giesy 1997). The acute toxicity of PAHs is extremely problematic when taken in context with determinations by Dr. John Giesy, a Distinguished Professor of Fisheries and Wildlife at Michigan State University, that natural ultraviolet light can increase the toxicity of PAHs on water surfaces by as much as 50,000 times under field conditions (Giesy 1997).

The findings of these studies also correlate to studies on snowmobile emissions. In a study of snowpack contamination by snowmobiles, for example, Matthew R. Graham of the University of Nevada-Reno found elevated readings of four PAHs -- acenapthene, acenaphylene, napthalene and phenanthrene -- in snow samples under field conditions. Graham detected levels of napthalene, for instance, of up to 12,000 ppb. According to the Occupational Safety and Health Administration (OSHA), the short-term human exposure limit (STEL) for napthalene is 15,000 ppb. OSHA's Health Hazard Data indicates that "contact may cause skin or eye irritation ... inhalation may cause headache, nausea and perspiration ... [and] ingestion may cause cramps, nausea, vomiting and diarrhea" (OSHA, 1996). The lowest published lethal human oral dose is 50,000 ppb.

Such high concentrations are particularly alarming for fish larvae, zooplankton, and perhaps other marine organisms. During an industry study, toxicologist James Oris of Miami University found that much lower PAH levels (5-70 parts per trillion compared to Graham's detections of 12,000 parts per billion) cause "a significant effect on fish growth ... photo-activated toxicity to fish and zooplankton as well as direct (no-UV) toxicity to zooplankton."(Oris, et al. 1998) According to John Giesy, only 19 ppb of another PAH compound (anthracene), under relatively low ultraviolet intensity (2,500 uw/cm2 of UV-A), would kill all exposed zooplankton in 30 minutes (Giesy 1997). And the Exxon Valdez study mentioned above concluded that sublethal levels of water contamination (as low as 1.0 ppb) stunted pink salmon growth and caused other chronic problems (Heintz et al. 1998). During this study, scientists showed that weathered oil retains its toxicity with certain compounds, especially PAHs. The report states, "[w]e conclude that water quality standards for TPAH [total PAH concentration] above 1.0 ppb may fail to protect fish embryos" (Heintz et al. 1998).

2. Methyl Tertiary Butyl Ether (MTBE)

Methyl Tertiary Butyl Ether (MTBE) -- a controversial fuel-additive and suspected carcinogen -- is contaminating water supplies nationwide. All 50 states use MTBE as an octane booster (2-3% MTBE), and 20 states are required to have gasoline with at least 11% MTBE. The Oxygenated Fuels Association (OFA) predicts that 70% of fuel sold nationwide will be oxygenated (11-15% MTBE) by the year 2000. Although the additive is commonly regarded as a hazard to drinking water from underground storage tanks, fuel spills and motorized watercraft, snowmobiles are a significant source of MTBE, a chemical with the potential to cause adverse health effects to humans and wildlife within park boundaries.

MTBE is a concern in terms of snowmobiles for two reasons: 1) because snowmobiles spill large quantities of unburned fuel into the environment, up to 15% of which is MTBE; and 2) because snowmobiles produce very high emissions containing carcinogenic MTBE combustion by-products.

Snowmobiles emit large quantities of unburned fuel into the environment because they consume large amounts of fuel in short periods of time. Because 25-30% of every gallon of gasoline consumed by snowmobiles (roughly 220,000 gallons in Yellowstone in 1995) contains up to 15 % MTBE, snowmobiles can dump from one-third to three-quarters of a gallon of MTBE directly into the environment every two hours.[10] Although no studies have addressed animal sensitivity (aesthetic) to MTBE, humans are extremely sensitive to the chemical. The Association of California Water Agencies reports that some consumers can detect MTBE in drinking water at 2 ppb. At 15 ppb, humans can consistently smell the chemical in the water.[11] Only one-third of a gallon of MTBE is required to bring the drinking water consumed daily by 90,000 people to a contaminant level of 15 ppb. It is therefore safe to assume that small amounts of raw MTBE from snowmobile exhaust leaching into snowpack and watersheds within park boundaries should be considered a threat to the aesthetic values of park water and snow resources, with perhaps more serious implications for wildlife.

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[10] Calculation based on average fuel consumption (USEPA), percentage of fuel emitted as raw fuel (25-30%, USEPA), and percentage of oxygenated fuel that is MTBE (11-15%, OFA).

[11] "Taste and Odor Properties of MTBE and Implications for Setting a Secondary Maximum Contaminant Level," prepared by Malcolm Pirnie for the Oxygenated Fuels Association, June 26, 1998.

The Environmental Protection Agency acknowledges that the "human health effects associated with breathing or otherwise consuming large amounts of MTBE for short periods of time or smaller amounts of MTBE over long periods of time are not known."[12] Although no data exists on the suspected human health risks of MTBE, EPA confirms that "in many animals, a lifetime exposure to MTBE in air causes cancer." Animals exposed to small amounts to MTBE show kidney damage and other adverse effects on the developing fetus.[13]

The toxic effects of MTBE on micro-organisms, marine life, and vegetation have not been extensively studied. California SB 521 will address concern that accumulating MTBE may adversely affect certain organisms in the food chain. Researchers at UC-Davis have begun studies on MTBE's effect on aquatic biota and other organisms. According to preliminary reports, MTBE is acutely toxic to various aquatic organisms at concentrations as low as 44 parts per billion (ppb), and bacterial assays are most sensitive in terms of toxicity measured at 7.4 ppb over a relatively short 48 hour period.

The combustion by-products and human metabolites of MTBE are also a concern for snowmobilers, other recreationalists, and rangers exposed to snowmobile emissions, and may be a concern for the environment. MTBE reacts with natural oxygen and hydrogen molecules in the air to form tertiary butyl-formate (TBF), an extremely destructive compound to tissues of mucous membranes and the upper respiratory tract. MTBE combustion also increases airborne concentrations of formaldehyde, an EPA-listed "probable" human carcinogen and a confirmed immune system suppressant. Peter Joseph, Professor of Radiologic Physics at the University of Pennsylvania School of Medicine, believes that these by-products of MTBE are responsible for "creating major public health problems, including an explosion in asthma totally beyond anything experienced in human history."[14]

EPA also confirms that the human metabolites of MTBE are tertiary-butyl alcohol (TBA) and formaldehyde. TBA is listed as "harmful or fatal if swallowed," and also suppresses the immune system. In Wilmington, North Carolina, residents of a trailer park were awarded nearly $30 million dollars for medical and compensatory damages from Conoco for MTBE drinking water contamination. Although the gasoline contained only 2% MTBE at the time, the medical expert reported that in every one of 175 patients tested, MTBE detected in the blood-stream was causing significant immune system suppression.[15]

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[12] Information obtained from EPA's Drinking Water Contaminant Candidate List at http://www.epa.gov in June 1998.

[13] EPA MTBE information obtained from the agency's Drinking Water Contaminant Candidate List (CCL), (http://www.epa.gov), June, 1998.

[14] Personal Communication with Mr. Joseph, June, 1998. (Note: These pers. comm. cites are from the Bluewater Network's Petition- refer to the original document for more information on authorship).

[15] Personal Communication with Mr. Joseph, June, 1998.

According to reports, the acute toxicity of MTBE is comparable to the known human carcinogen and reproductive toxin benzene. Dr. Myron Mehlman, an adjunct Professor of Public Health at the Robert Wood Johnson Medical School and editor of Toxicology and Industrial Health, believes that research shows that "MTBE is a human carcinogen, causing the same cancers in laboratory animals as benzene, and at the same dosage levels."[16]

EPA requires reporting of any benzene spill exceeding one pound due to its highly toxic properties. Most snowmobile models dump a pound of unburned MTBE into the environment every 1-2 hours. Thus, the presence of MTBE in gasoline as a highly water soluble and persistent suspected carcinogen, with projected yet unstudied effects on water and aquatic life, exacerbates the threat of significant air and water emissions from snowmobiles.

Permitting the use of snowmobiles in our National Park System fails to safeguard our most pristine areas from astonishing amounts of water and air pollution, and thereby threatens park resources, wildlife, visitors and employees. Snowmobile use is therefore incompatible with National Park values, as declared by the Organic Act of 1916, and violates the provisions set forth by the Clean Water Act, the Clean Air Act amendments of 1990, and the aforementioned Executive Orders and Policy Acts.

3. Other Contaminants, Resource Impacts and Ecosystem Effects

Although park officials and snowmobile advocates point out that snowmobile emissions are localized to areas where the machines are used, the effects are severe, and far-reaching. For example, increased ground level smog and nitrogen concentrations cause acid rain, acid snow, and water pollution. Of the 220,000 gallons of gasoline and 11,000 gallons of lubrication oil sold for snowmobiling by service stations within Yellowstone National Park alone in 1995, up to 55,000 gallons of fuel and 2,700 gallons of motor oil entered the environment as unburned, raw petrochemical pollution.[17] About 5,000 gallons of gasoline, and 250 quarts of 2-cycle oil was spilled by National Park Service snowmobiles alone. More than 60% of Yellowstone's snowmobile trail network runs along major rivers, lakes and streams.

Toxic raw fuel and air emissions accumulate in the snowpack along rivers, streams and lakes where snowmobile roads are most common. Ingersoll et al. (1997) found increased levels of sulfates and ammonium in Yellowstone's snowpack compared to baseline conditions. Pollutants "locked" in the snowpack are released very rapidly during the first few days of snow melt.

Researchers have found that 80 percent of acid concentrates are released in the first 20 percent of snowmelt, and that this acid pulse is a major cause of death for aquatic insects and amphibians (Rawlins 1993). This acid pulse may also reduce the acid neutralizing capacity of aquaticsystems, particularly those found at high elevations which typically are less capable of neutralizing acid deposition.[18] In one study, Charette et al. (1990) determined that "during the spring melting, the massive liberation of atmospheric pollutants accumulated in the snow cover is connected to a very important increase of acidity, which may be more than 100 times higher than the usual acidity level in surface water."

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[16] Personal Communication with Dr. Mehlman, June, 1998.

[17] Gasoline sales reported by the Montana Department of Environmental Quality in a report by Howard E. Haines. Raw fuel emissions are calculated using EPA data which confirms that 25% of the fuel "consumed" by a two-stroke engine is emitted "out the tailpipe" unburned.

As documented by Shaver et al. (1988), the effects of pollutants can be both biological and ecological, and both acute and chronic. Such effects on plants include foliar injury, reduced productivity, tree mortality, decreased growth, altered plant competition, modifications in species diversity, and increased susceptibility to diseases and pests. Alterations to the vegetative community are also likely to result in implications to Park herbivores and other ecosystem components. In addition, ingestion by herbivores of trace elements deposited on leaf surfaces may lead to other impacts to the individual organism and throughout the food chain.

Several studies have determined that the survival and productivity of amphibians is drastically impacted by increasing acidity. Kiesecker (1991), for example, found that 60-100 percent of tiger salamander eggs were dead or unviable in ponds at pH 5.0 or less, 40 percent were dead or unviable at pH levels between 5 and 6, and 20 percent were dead or unviable in water with a pH above 6.0. At pH levels below 6.0, a slower hatching rate, slower growth to maturity, and a decreased ability of tiger salamanders to catch and eat tadpoles was observed. The acidity of water also affected the survival of tiger salamanders. Harte and Hoffman (1989) found that less than half as many tiger salamander embryos survived at about pH 5.6 or less compared to those surviving at about pH 6.1 or greater and that survival of zooplankton, a common food of the tiger salamander, was also drastically affected by increased acidity. Other amphibians, including boreal toads, chorus frogs, and northern leopard frogs also experience significant mortality when water pH is between 4.3 to 4.9 (Corn and Vertucci 1992).

In a study on the impact of two-stroke emissions on fish, Balk et al. (1994) determined that hydrocarbons disrupt normal biological functions (e.g. DNA adduct levels, enzyme activity), including cellular and sub-cellular processes, and physiological functions (e.g. carbohydrate metabolism, immune system). Serious disruption of fish reproduction also seems likely.[19] (See also, Tjarnlund et al. 1995, 1996). Baker and Christensen (1991), for example, found that embryo and fry of rainbow trout have increased mortality at about pH 5.5.

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[18] Studies conducted in Yellowstone revealed that "many lakes and streams in Yellowstone are susceptible to acidification by atmospheric deposition" (National Park Service 1983). Similarly, in the Forest Service's Eastside Ecosystem Management Project, it was determined that concentrations of air pollutants in the snowpack "are greatest in Wyoming and in a small area within Montana just west of Yellowstone National Park. Some of the largest concentrations of sulfate, nitrate, and acidity were measured at sites near Yellowstone." (U.S. Forest Service 1996).

[19] Juttner, et al. (1995) determined that the toxicity of water contaminated by a two-stroke engine was far higher than contamination caused by four-stroke engine or a catalyst equipped two-stroke engine. Two-stroke engines also emitted significantly more hydrocarbons and volatile organic compounds into the water than a four-stroke engine (Juttner, et al. 1995a).

Additional evidence of such impacts comes from toxicologist James Oris and his colleagues at Miami University who conducted a study on the effects of hydrocarbon pollution from two-stroke marine engines, the exact same engine used by snowmobiles, on fish growth. The study, funded by the National Marine Manufacturers Association, found fish growth to be decreased by as much as 46% as a result of exposure to two-stroke water pollution. Although the study addressed concern about marine engines, snowmobiles are capable of creating similar levels of water pollution in streams, lakes and rivers due to frozen or trapped hydrocarbon pollution in snowpack and PAH contamination described above.

Snowmobiles discharge of sulfur can acidify park waters, having similar effects on amphibians and other life as acid rain. Like PAHs, sulfate is positively correlated with snowmobile traffic intensity, as documented in a study of high elevation snowpacks in Yellowstone Park and other Rocky Mountain sites (Ingersoll, 1999). Sulfate is poorly absorbed by soil (Campbell et al., 1995), and tends to run off directly with snowmelt into streams and lakes. Sulfate and other industrial pollutants in snowpacks in southern Norway are blamed for acidification of surface waters, and subsequent elimination of trout populations (Hagen and Langeland, 1973). The same study documents severe loss of aquatic invertebrate species diversity, which is impacted by acidification long before effects are apparent as fish mortality. Similarly, Sharpe et al.(1987) documented a strong correlation between snowmelt runoff-induced episodes of stream water acidity, and absence of fish in a Pennsylvania watershed.

Ingersoll (1999) found low levels of pollutants in the actual snowmelt water samples from Yellowstone Park, and reported that the possibility of "localized, episodic acidification of aquatic ecosystems in these high snowmobile-traffic areas may be possible", due to the *ionic pulse* effect in which snowpack pollutants are concentrated in the earliest phase of snowmelt runoff (Campbell et al., 1995; Hagemann and VanMouwerik, 1999; Hagen and Langeland, 1973). The ionic pulse effect is potentially a threat to amphibians as well as native fish populations in the parks, since it may coincide with spring spawning and hatching, when the highly acid-sensitive yolk stage occurs (Hagen and Langeland, 1973). Further research is clearly needed to "prevent degradation of aquatic habitat from pristine condition" and to provide the "continued protection of unaltered habitats" which is known to be necessary for perpetuation of native aquatic species such as Yellowstone cutthroat trout (Varley and Gresswell, 1988).

Ingersoll (1999) concluded that "[c]oncentrations of ammonium and sulfate at the sites in snowpacked roadways between West Yellowstone and Old Faithful were greater than those observed at any of 50 to 60 other snowpack-sampling sites in the Rocky Mountain region and clearly were linked to snowmobile operation" (Ingersoll, 1999). This study, however, only established "important baselines for future evaluations" (Id.). In their snowmobile emissions report to Yellowstone Park managers, Flores and Maniero (1999) suggest there may be unknown synergistic effects on humans from cumulative, simultaneous exposure to various pollutants. For example, lead emissions from lead gasoline powered machines used in the parks in past years may have degraded park water quality and may have had unknown, cumulative effects on water quality and aquatic biota. Such synergistic effects on aquatic ecosystems must be investigated. Decades of snowmobile effects on snowpack and Park waters necessitate further and immediate research which attempts to quantify impacts from degradation of water quality.

This substantial body of research assessing the components of snowmobile pollutant deposition on snowpack and concomitant water quality effects exists, despite the near lack of research from Yellowstone National Park--which receives more snowmobile use than all other national parks combined.

> Snowmobile-polluted snow and its effects on wildlife, fish, and other aquatic organisms have not been investigated in Yellowstone, although published accounts elsewhere began at least 24 years ago…This seems to be another topic that should have been researched here long ago, particularly since we probably experience a higher intensity of snowmobile use than anywhere else. (Caslick, J. 1997.Impacts of Winter Recreation on Wildlife in Yellowstone National Park: A Literature Review and Recommendations" Planning Office Files, NPS, YNP.)

The majority of Yellowstone's snowmobile routes are adjacent to waterways. These waters shelter important fish populations, including Yellowstone cutthroat trout (Varley and Gresswell, 1988). The waters of the Parks also provide breeding grounds for amphibians, all of which are extremely sensitive to increased toxicity and water quality degradation. Koch and Peterson (1995) name acidification and environmental contaminants as likely contributors to the worldwide decline of amphibians, paralleled in Yellowstone and Grand Teton. Yet no studies have been completed to assess the impacts of the toxic pulse resulting from polluted snowpack melt on amphibians or other biota in the Parks. Nor have any studies been undertaken in Yellowstone to assess food chain bioaccumulation effects of snowpack pollution.

4. Legal Requirements

Any degradation of park water quality is inconsistent with applicable law and regulation. The parks' waters are governed by state law which affords them high levels of protection. All waters located within national parks are designated as "outstanding resource waters" under Montana law; similar protections exist under Wyoming law. (Montana Code Annotated §75-5-103(20)). These "outstanding resource waters", much like Class 1 airsheds under the Clean Air Act, are to be protected from degradation or deterioration of water quality. "…[C]ertain state waters of such environmental ecological or economic value that the state should prohibit, to the greatest extent practicable, changes to the existing water quality of those waters. Outstanding resource waters must be afforded the greatest protection feasible under state law" (Id at §75-5-315(1)).

5. Solutions

The DEIS preferred alternative will not mitigate for snowmobile effects on Park water quality, ecosystem effects, or health effects. The Citizens' Solution would minimize water quality degradation as snowcoaches operate on four-stroke technology which does not emit unburned fuel and oil into surrounding snow. As stated earlier, snowcoach technology should be improved to include alternative fuels which further minimize emissions.

D. Wildlife Impacts

1. Existing Impacts

Impacts to wildlife from winter recreation have been documented since the onset of snowmobile use in the 1960s (Yochim, 1998). Following a review of all available data on wildlife impacts from winter recreation, Caslick (1997) concluded that "there is now ample documentation to administratively close these thermally-influenced winter habitats, prohibiting winter use by private and commercial snowmachines, skiers, snowshoers, and hikers." Caslick also recommended that the Winter Use EIS "include alternatives of 'no snowmobiling' as well as...consideration of alternative modes of transport for winter visitor enjoyment of park resources." (Caslick, J. 1997.Impacts of Winter Recreation on Wildlife in Yellowstone National Park: A Literature Review and Recommendations" Planning Office Files, NPS, YNP).

Impacts to wildlife can be both direct and indirect. The grooming of roads to facilitate snowmobile use can also adversely affect wildlife. Direct impacts include the harassment, chasing, and killing of wildlife by snowmobilers. Coyotes, wolves, deer, and other wildlife have been brutally killed as a result of irresponsible and illegal snowmobile use.

Indirect impacts are numerous and exert a considerable impact on wildlife, including birds, large and small mammals, and imperiled species. For many species, including elk, bison, deer, foxes, coyotes, subnivean wildlife (i.e., small rodents who live under the snowpack), swans, and eagles, snowmobile use can result in significant disturbance resulting in changes in movement and distribution patterns, habitat use, population dynamics, and energetics. In winter, the energy balance of an animal is critical to its survival. Thus, any perturbation to the animals, including disturbance by snowmobiles, can drastically impact an animal's energy reserve possibly leading to the animal's death. Collectively these impacts can adversely affect the productivity, viability, and survival of both individual animals and animal populations. Winter is a critical period for wildlife. Winter climate, including snowfall, depending on its severity and duration, can have a substantial regulatory influence on many wildlife species, particularly ungulates. This is one of several natural regulatory controls on the growth of wildlife populations and on the activity and habitat use patterns of individual animals.

Snowmobiling and the grooming of snowmobile roads substantially affects wildlife energetics. For some species which typically demonstrate a flight response to snowmobiles, this increased use of energy is in addition to natural energy limitations during winter. Conversely, animals that utilize snowmobile roads may save energy. This impact, however, is entirely artificial and can disrupt population dynamics, movement and distribution patterns, habitat use, and, particularly in the case of Yellowstone bison, animal survival.

In particular, energy use by animals is of crucial importance in the winter. As winter progresses, many animals experience a negative energy balance, with more energy being used to survive than is being consumed in the form of forage. Natural (i.e., predators, snow) or, artificial (i.e., snowmobiles, hunting) perturbations to an animal's environment or behavior which affect, either negatively or positively, an animal's energy balance or stress level can have a substantial effect on survival and productivity, and can impair immune function (Dorrance et al. 1973, Greer 1979, Moen 1978, Hudson 1973, Harlow et al 1987).

Snow cover affects an animal's energy balance in several ways. First, snow cover may act as a hindrance to wildlife movement, effectively restricting the amount of habitat available to wildlife in the winter (Formozov 1946, Sweeney and Sweeney 1984). The ability of wildlife to use areas covered with snow depends on variables such as leg length, chest height, foot load, momentum or velocity, body weight, snow density, snow depth, snow hardness, and type of movement (i.e., trotting, walking, running) (Parker et al. 1984, Mattfeld 1973, Telfer and Kelsall 1984). Second, snow cover reduces the availability of forage critical for survival during the winter. (Formozov 1946, Parker et al. 1984). With an increase in energy expenditures caused by moving through snow combined with a decrease in the amount of available forage (Severinghaus 1947, Leopold et al. 1951), a negative energy balance is created, in which more energy is expended than is consumed. As reported by Parker et al., (1984):

> Snow cover is a major factor influencing the survival of wintering ungulates because it affects their ability to escape predation, the timing and magnitude of migratory movements, and habitat selection (Edwards 1956, Pruitt 1959, Gilbert et al. 1970, Telfer 1970,78, Coady 1974, Prescott 1974, Leege and Hickey 1977, Harestad 1979). Snow impedes movement, increases energy expenditure, and reduces forage availability. While three basic properties of snow -- depth, density, and hardness -- influence wintering ungulate populations (Coady 1974), snow depth has been considered the most important attribute affecting ungulate movement and mobility (Wallmo and Gill 1971, Hugie 1973, Telfer 1978).

In elk, for example, the energetic implication of travel for a 100 kg elk calf through 58 cm of snow is approximately five times the cost of locomotion without snow (Parker et al., 1984). This increase in energy expenditure as snow depth increases (Mattfeld 1973) may be "the result of a reduction in the ballistic movements of the legs, an increase in the height to which the feet must be lifted (Heinonen et al. 1959), or an increase in the swinging motion of the body (Ramaswamy et al. 1966)." Id. Parker et al. (1984) also determined that energy expenditures in elk increased with increasing snow density.

While energy use would be expected to be greater during severe versus mild winters, Hobbs (1989), in his model examining energy use in mule deer, determined that total energy expenditure during a mild winter exceeded predicted expenditure during a severe winter, despite increases in costs of thermoregulation and activity in response to severe weather. As explained by Hobbs, "This seeming paradox occurred because energy intake was greater during a mild winter, and, hence, weight loss was substantially less. Thus, because deer were heavier and because energy expenditure is strongly influenced by body mass, total energy costs were greater during mild winters than severe ones." If this model is accurate, then larger animals, like bison, elk, and other ungulates, would not necessarily benefit energetically from mild winters because of increased energy needs associated with increased body size. Though the total energetic expenditure may be less during severe winters, Hobbs found that energy intake was substantially less and the impacts of disturbance substantially greater during severe winters. Consequently, the impact of snowmobile use on wildlife is likely to be greater during severe winters, but the impacts are not mitigated simply due to mild winter weather conditions.

While winter climate, particularly snow, has an enormous impact on animal energy expenditures and stress, that impact is exacerbated by snowmobiling, and trail grooming, due to the disturbance they cause to many species of wildlife. Indeed, researchers have suggested that additional human caused stress on wildlife in the winter is undesirable (Dorrance et al., 1973; Greer 1979, Moen 1976), since it may increase energy use and stress resulting in increased mortality, decreased productivity, and changes to behavioral adaptations (Moen 1976, Freddy 1977). The effects of recreation-induced stress, including lower reproductive output (Geist 1978), however, may not be evident immediately, but rather may appear days, weeks, months, or years after disturbances (Gutzwiller 1991). Moreover, recreation-induced stress may exacerbate the effects of disease and competition, and lead to higher mortality well after disturbances occur. Id

In many instances, snowmobiles induce animal flight, causing increased energy expenditures. In Yellowstone, for example, evasive maneuvers in response to snowmobiles have been documented in a number of species, including elk and mule deer. These maneuvers result in increased energy expenditures for the affected wildlife.[20] For example, Aune (1981) reported flight distances of 33.8 meters for elk and 28.6 meters for mule deer in response to snowmobiles in Yellowstone. The energy cost estimates calculated for these impacts were 4.9 to 36.0 kcal in elk and 2.0 to 14.7 kcal in mule deer per disturbance (Parker et al., 1984). These energy expenditures are roughly equivalent to the necessary additional consumption of 4.3 - 31.7 grams of dry forage matter by elk and 1.8 - 12.9 grams by mule deer each time a disturbance occurs. Id. Severinghaus and Tullar (1978) provide an even more graphic example of the potential implications of energy use on wildlife, and specifically white-tailed deer: they theorize that for white-tailed deer, during a 20-week winter with snowmobile harassment each weekend, "food enough for 40 days of normal living would be wasted just escaping from snowmobiles." (emphasis added).

Similarly, Freddy et al. (1986) documented that mule deer moved 158 meters when fleeing from a single encounter with a snowmobile resulting in energy costs per encounter of 10-22 kcal or 0.4-0.8 percent of the daily metabolizable energy. If disturbed by snowmobiles while grazing, the cost per encounter was 0.6-1 percent of their daily metabolizable energy. If disturbed while lying down, the energy expenditure per encounter increased from 2 to 10-25 kcal due to the flight response exhibited by the deer.
Indeed, wildlife disturbance caused by snowmobiles and other forms of recreation, in addition to causing behavioral changes and increased energy use, disrupts normal home ranges and activity patterns (Kopischke 1972, Dorrance et al. 1975), and displaces animals into poorer quality habitat. Such displacement could be equally or more detrimental than increased energetic costs caused by movements (Hobbs 1989), and may result in reduced productivity.

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[20] Indeed, of all recreational activities studied by Aune (1981), the most significant expenditures of energy created by recreationists occurred "during interaction along the groomed snowmobile trail and when photographers moved up for a closer shot."

Direct impacts, including chasing and harassing wildlife, resulting in animal exhaustion and mortality are also caused by the irresponsible and illegal operation of snowmobiles. (Baldwin 1970, Malaher Undated, Wetterstcn 1971, Heath 1974). The purposeful pursuit of a wild animal with a snowmobile, which has occurred and continues to occur, may result in death or, at least, will negatively affect the critical energy balance of the animal which, in turn, is likely to lead to death, reproductive failure, or other adverse impacts. Although snowmobiles in National Park units are, in most cases, legally restricted to the designated snowmobile route, illegal trespass into non-designated areas occurs, resulting in greater impacts, including direct harassment of animals and vegetation impacts.

2. Regulatory Requirements to Protect Wildlife

NPS regulations prohibit "disturbing" living wildlife from its "natural state". (36 C.F.R. §2.1(a)(1)(i). Regulations governing snowmobile use in national parks specifically prohibit such use "except where designated and only when their use is consistent with the park's natural, cultural, scenic and aesthetic values, safety considerations, park management objectives, and will not disturb wildlife or damage park resources." (36 C.F.R. §2.18 (c)) When such damage is known to occur, the Superintendent is authorized to "regulate, restrict, or close a portion or all of a Park area to all public use if such action is necessary to protect the environment or scenic values of the Park, [and to] protect natural resources.., " 36 C.F.R. §1.5 9a) (1). The evidence of adverse effects of winter recreation on wildlife, air resources, natural quiet, and water quality demonstrates that the parks have not heeded regulatory guidance to prevent damage to park resources by prohibiting deleterious activities like snowmobiling.

Clearly, current snowmobile use of the park is in direct conflict with the Organic Act, regulations, and NPS policy guidelines requiring protection of wildlife. The preferred alternative and any alternative which allows continued snowmobile use will perpetuate adverse impacts to wildlife, contrary to Park regulatory and statutory obligation.

3. Solutions

The Citizens' Solution would eliminate all snowmobiling and curtail off-trail backcountry use by non-motorized users. Doing so reduces many of the direct and indirect harms to wildlife resulting from winter recreation. Road-grooming would continue under The Citizens' Proposal, although perhaps less frequently and in a different manner. There remain significant questions about the effects of road-grooming on park wildlife, particularly bison, which are discussed below.

E. Bison and Road-Grooming

Unlike Yellowstone's elk and mule deer, the stolid temperament of bison permits their use of groomed roads even in the presence of large numbers of snowmobiles. Moreover, even bison who are initially skittish around snowmobiles quickly become accustomed to the machines (Meagher 1993, Aune 1981), thereby reducing energy loss associated with avoiding snowmobiles.[21] For these animals, acclimating to snowmobiles is not beneficial since it facilitates use of the groomed trail system which, in turn, stimulates bison emigration from the park where most are killed due to unsubstantiated management decisions made by the Montana Department of Livestock.

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[21] As snowmobile traffic increased, however, both Aune (1981) and Meagher (1993) reported increased bison use of the groomed roads at night to avoid harassment. Aune (1981)

While some animals may become accustomed to snowmobiles (Meagher 1993; Aune 1981), this does not mean that snowmobile impacts to the species are benign. The decrease in animal response to a particular stimulus over time may be in response to a progressive weakening of an animal's physical condition throughout the winter (Richens and Lavigne 1978, Severinghaus 1947) and/or to preserve critical winter energy stores. Thus, although an animal's physical response to a particular stimulus may decrease in intensity with time, internal or physiological responses (e.g. stress levels, heart rate) may consistently rise as a result of such stimuli (Moen et al., 1982, MacArthur et al. 1979, Moen et al. 1978a, Cherkovbick and Tatoyan 1973, Thompson et al. 1968). Such an increase may impair the survival and productivity of an animal.

Thus, even if animals demonstrate no physical response to the presence of snowmobiles, they still may be experiencing adverse effects due to increased stress caused by the machines. In those Parks where snowmobile roads are not groomed, the energetic consequences of a physical or physiological response to snowmobiles is additive to the energetic costs of surviving the winter. In those Parks with a groomed trail system,[22] the negative energy costs associated with a physical or physiological response to snowmobiles are likely more than offset through the energy savings associated with the use of groomed roads in those species who utilize the trail system. Therefore, while a groomed road system is inconsistent with promoting the natural regulation of wildlife populations -- a Park Service mandate -- those species that use groomed roads may benefit in some ways from that use, while those that do not use the roads are at a disadvantage from snowmobiles. This, in turn may result in adverse effects to species population dynamics, movements, distribution, and habitat use in other ways.

In Yellowstone, for example, bison use of the energy-efficient groomed roads has reduced the proportion of the bison population succumbing to natural mortality,[23] increased

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also noted this same temporal shift in other Yellowstone wildlife. Such reactions are not necessarily evidence of habituation, but rather demonstrate that snowmobiling in Yellowstone is resulting in enormous physiological impacts to Yellowstone wildlife causing drastic and unnatural behavioral adaptations. For a complete discussion of the impacts of snowmobiling and trail grooming on bison in Yellowstone, See, Schubert (1997), "Adverse Effects of Trail Grooming and Snowmobile Use on Winter Use Management in the Greater Yellowstone Area with a Special Emphasis on Yellowstone National Park," which is hereby incorporated by reference.

[22] A groomed trail is prepared by trail grooming equipment. However, multiple and repeated snowmobile use of a trail not intentionally groomed to facilitate snowmobile use may cause the same impacts.

[23] The proportional decrease in winter kill is reflected in population and winter kill estimates after the winters of 1981-82, 1988-89, and 1991-92. During the winter of 1981-82, which was relatively mild in regards to both temperature and snow accumulations, 66 and 237

survival and productivity, and provided bison with access to additional or alternative wintering habitat both in and outside of the Park. As a consequence, Yellowstone's bison population may be nearly double the size that would naturally exist if groomed roads were not present. (Meagher et al., 1997). Consequently, the artificiality of the system is resulting in significant and severe impacts to the bison population and Yellowstone's ecology, including the slaughter and shooting of bison outside of Yellowstone's borders, the functional use (i.e., the ability of bison to use the range given their feeding ecology and gregarious behavior) of bison winter and summer range, and adverse impacts to critical winter survival habitats within the geothermal areas in the Park. (Meagher 1993, Meagher et al. 1997, Caslick 1997).

If such a groomed trail system were not available to bison, then winter movements would entail energy costs which are not currently being expended. In Yellowstone elk, for example, Delgiudice et al. (1991) determined through metabolite profiles in snow-urine samples, that elk on Yellowstone's northern range and in the Madison-Firehole area exhibited severe energy deprivation and accelerated degradation of lean body tissue in areas with increased elk density and/or deep snow cover.[24] If bison were subject to such energetic costs, then, depending on winter severity, this impact would be reflected in a proportional increase in natural winter kill and a decrease in survival and productivity resulting in a smaller population size. For Yellowstone bison a smaller population size would likely reduce the number and rate of animals moving outside of Yellowstone where they are shot. Indeed, as Meagher (1993) reported, "when winter conditions allowed these and larger aggregations without bison groups either breaking up or making major movements to new ranges, the bison appeared to have little environmental cause to travel."[25]

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winter kill bison carcasses were located in the Pelican and Mary Mountain winter areas, respectively. Under similar winter conditions during the winter of 1988-89, 58 and 232 winter killed bison were found in the two wintering areas. Though the winter kill numbers remained essentially the same, the bison population size increased from 2,000 to 3,000 during that time. During the winter of 1991-92, a winter with a very severe beginning, 53 winter killed bison were found on the Mary Mountain winter areas with other observations indicating minimum winter mortality in other areas. Yet, between 1988-89 and 1991-92, though over 800 bison were slaughtered outside of the Park, the population increased from 3,000 to 3,400. As concluded by Meagher (1993), "The increase of numbers but decrease in mortality under stress conditions indicated the usefulness of bison movement (on groomed roads) in alleviating effective severity of winter conditions."

[24] While some elk utilize the groomed snowmobile roads in Yellowstone (Aune 1981), they do not utilize the roads as frequently as bison. Consequently, elk do not experience the same level of energy savings as accrued by bison.

[25] Although snowmobile roads may in some instances provide short-term benefits to individual animals by permitting them to access new foraging areas and otherwise decrease the energetic costs of winter travel, even such a benefit is a serious disruption of those animal's natural behaviors and role in the ecosystem. In the case of Yellowstone's bison, for example, even such short-term benefits have resulted in disaster, by increasing the number of bison beyond the level that would exist absent this intrusion into the Park's natural state contributing to the emigration and slaughter of bison beyond Yellowstone borders.

In addition to the energetic impacts of snowmobiling and trail grooming on individual animals and populations, snowmobile use and groomed roads in the Parks also adversely affect the movements, distribution, habitat use, and population dynamics of wildlife.

In Yellowstone, Aune (1981) has reported that heavy snowmobile traffic inhibits free movement of animals across roads to preferred grazing areas and temporarily displaces wildlife from areas immediately adjacent to the roads. Cole (1977) has also noted the displacement of elk along the roads during periods of fairly continuous travel by snowmobiles in the Madison and Firehole River Valleys of Yellowstone.

In 1997, GYC submitted comments on Yellowstone National Park's Temporary Closure of a Winter Road EA. We believe our comments are still relevant today, and want to take this opportunity to reiterate certain points. At that time we stated that we felt that the NPS must gather better information about the impact of winter road grooming on bison and other wildlife. There were, and still are, very serious concerns about the effects of such grooming on bison distribution and populations, and the subsequent treatment of bison that wander outside the park. This relationship can only be documented by stopping the grooming of certain roads within the park. So far, the park has been unwilling to take that step. As the bison of Yellowstone apparently represent one of the only populations that have not been contaminated with bovid genes, their existence in Yellowstone provides the opportunity for understanding wild bison population dynamics on a scale unmatched elsewhere in this country. For this reason alone, the need to determine the impacts of road-grooming on bison cannot be overstated.

In 1997, GYC supported the closing of the Hayden Valley road segment for at least three years. We felt that winter variability demanded that three years, at a minimum, should be planned for closure. We also supported and continue to support the closure of certain other East Side roads that might have the greatest effect on bison movements in order to assess road-grooming impacts.

The draft report completed by Mary Meagher (1993) (discussed above), which was referenced by one sentence in the 1997 EA, and subsequent publications by her, provide very important information on the influence of winter recreation on bison populations and distributions. The use of the groomed roads has lead to energy savings by bison, increased bison populations, expanded range-use areas, and altered distributions. As they continue to populate lands on the west side of the park, where they also leave the park, they are slaughtered by the state of Montana. Bison are not responding to natural conditions, but to a landscape manipulated by humans for recreational purposes. The NPS, unfortunately, has not provided any documentation about winter road grooming impacts on bison or other wildlife. Road closures are the only option for fully assessing influences and impacts of recent changes in bison population dynamics caused by road grooming.

Dr. Mary Meagher believes that only the alternative of allowing only the road segment from the south entrance to Old Faithful to be used by oversnow vehicles will result in a bison population that functions according to fluctuations in natural ecological conditions. We are very concerned about the potential for losing this population, and we are looking forward to her upcoming publications on this issue. At the same time, we strongly urge the NPS to also make it a priority to assess that potential, and to use road closures as an important assessment tool in evaluating road-grooming impacts. Once assessment of the situation is completed, the NPS must halt grooming of park roads if it is shown to be detrimental. The Citizens' Solution is then an interim plan, amendable pending thorough examination and mitigation of the above discussed wildlife issues.

V. User Conflict

In addition to impacts to wildlife, and other Park resources, snowmobile use Yellowstone and Grand Teton is also having a considerable impact on other Park users. Unfortunately, few efforts have been undertaken to ascertain or quantify the impact of snowmobile use on other Park users, including non-motorized users.

In the Greater Yellowstone Coordinating Committee draft report on winter visitor use in the Greater Yellowstone Ecosystem, conflict areas between motorized and non-motorized users both within and outside of the Yellowstone and Grand Teton National Parks are identified (GYCC 1997). This information, in concert with visitor use survey data provided by Littlejohn (1996, 1996a), demonstrates that conflicts between motorized and non-motorized users occur and are critical in influencing public use and enjoyment of our National Parks. For example, in her 1995 winter surveys of Yellowstone and Grand Teton visitors, Littlejohn documented that the noise, pollution, and number of snowmobiles was frequently reported by survey respondents as what they liked least about their experience in Yellowstone and Grand Teton. Similarly, a recent survey in Grand Teton conducted for the Teton County Commission found that 96 percent of survey respondents thought snowmobiles had a negative impact on Grand Teton because of noise, pollution, disturbance to wildlife and habitat, and due to conflicts with skiers. ("Group Discusses Parks' Winter Use," Casper Star Tribune, October 29, 1998).

Opposition to snowmobiles by other Park users was critical in the decisions made by the National Park Service to close Glacier and Lassen Volcanic National Parks to snowmobile use. In Lassen Volcanic National Park, for example, "most skiers who were interviewed indicated that they would rather not have snowmobiles on the same routes, while virtually all snowmobilers indicated that they felt there was no conflict." (September 13, 1985 memorandum from Western Regional Director to National Park Service Director). In Glacier, a briefing statement prepared by the Park Service on snowmobile use indicated that "over 90% of the comments opposed to snowmobile use related that concern to silence, tranquillity, or in other words, aesthetics. Because aesthetics are an emotion, a feeling, it is impossible to quantify. However, it is a very valid concern, and the National Parks represent, above all other values, an emotion, a feeling, which Americans can obtain only in a handful of other natural scenic places."

Park Service regulations/policies specify that recreational use of parks will be managed "so as to protect park resources, provide for public enjoyment, promote public safety, and minimize conflicts with other visitor activities and park users." (USDI 1988 at 8:2. Recreational activities which cause "unacceptable impacts on visitor enjoyment due to interference or conflict with other visitor use activities" are prohibited in National Parks. Id. at 8:3. Specifically, National Park snowmobile policy dictates that snowmobile use may be permitted in National

Parks only on designated routes and water surfaces "in locations where there will be no significant adverse impacts on the park's natural, cultural, or scenic resources and values and in consideration of other visitor uses." Id. at 8.5. Snowmobile use is inherently inconsistent with this regulation and policy.

The use of snowmobiles by some park visitors causes adverse effects to other users by virtue of air pollution, noise, crowding and commotion created by snowmobiles. The parks have received numerous complaints on this matter through the years. In order to address this important issue of quality of visitor experience, John Sacklin, Yellowstone Park Chief Planner, specified three alternatives representing "a good range of solutions to the winter visitor use management issues in Yellowstone National Park." The first was to "[l]imit motorized winter oversnow access to snowcoaches only. Restrict private snowcoaches". He explained the rationale behind such an alternative: " We would return to the fundamental reasons why people come to Yellowstone in winter: to enjoy and experience the spectacular scenery, wildlife, thermal features, and solitude. The means of accessing these features would no longer overwhelm the experience…Nearly all conflicts between users would be eliminated." He went on to state that merely limiting numbers of visitors and requiring them to be in tours would result in "most" user conflicts to remain.(John A. Sacklin to Superintendent, Sept. 19, 1995. In Planning Office Files, File: "Yellowstone Alternatives", NPS,YNP,WY).

The preferred alternative would not resolve all visitor conflict, as some visitors would still be permitted to use snowmobiles -a form of access which is inherently disruptive to other visitors due to high levels of noise and noxious air pollution. Testimony at the public hearings attested to the fact that many winter visitors refuse to return to the parks because of the impacts of snowmobile use. Visitors with respiratory or other health problems would be advised not to visit the parks under current or proposed conditions. Those desiring to experience the natural sounds of the parks in winter find little respite from snowmobile noise.

In order to rectify these visitor conflicts, the Park Service must implement an alternative that ensures that access to the park does not detract from other visitors' experiences. The only proposed alternative that accomplishes this and which would result in greatest protection of resources is Alternative G, the mass transit, snowcoach-only proposal echoed by the Citizens' Solution and aptly described by John Sacklin as the best approach to minimize user conflicts.

VI. The Legal and Policy Framework for the Preeminent Park Responsibility: Protection of Resources

Yellowstone National Park must comply with the Organic Act, Yellowstone Act, NPS Management Policy and Executive Orders 11644 and 11989. Current park policy of allowing snowmobile use runs counter to existing laws and regulation. The purpose of the National Park System is clear: to protect park resources.

A. The Organic Act

Upon Yellowstone's creation in 1872, Congress declared it to be "a public park or pleasuring ground for the benefit and enjoyment of the people." (16 U.S.C. §21) Such public benefits were not without limits, as Congress directed the Secretary to make regulations providing for "the preservation, from injury or spoliation of all timber, mineral deposits, natural curiosities, or wonders, within the parks, and their retention in their natural condition." Id at §22.

The National Park Service Organic Act, passed in 1916, (16 U.S.C. §1 et seq) sets forth the purpose of the NPS as "to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." The intent of Congress was to preserve the scenery, natural objects and wildlife of the National Parks. (The legislative history of the Organic Act provides additional support for the preservation mandate. In a House Report on the Act, for example, the overriding purpose of the bill was stated as to preserve "nature as it exists." (H. Rep. No. 700, 64th Congress, 1st Sess. 3 (1916)).

In subsequent amendments to the Organic Act, Congress reemphasized the national significance and importance of National Parks and clarified the management guidance for NPS units. Specifically, in 1970, Congress declared that NPS units shall be administered as called for in a Parks' enabling legislation or other applicable authorities, including, but not limited to the Organic Act. Furthermore, in the 1978 Redwoods amendments, Congress stated that "the authorization of activities (in National Parks)... shall not be exercised in derogation of the values and purposes for which these various areas have been established except as may have been or shall be directly and specifically provided by Congress. (16 U.S. C. §1a-1). Parks, in other words are not to be treated like national playgrounds, but, rather, Congress intended preservation of Park resources to be paramount, with public use regulated in a manner which retains the natural, undisturbed, character of the Park.

Court decisions have reinforced the Park Service's affirmative duty under the Organic Act to protect park resources above visitor enjoyment. There can be no legitimate dispute that the Park Service has a statutory mandate to adopt rules which "best achieve the Organic Act's mandate," including rules to prohibit snowmobiling if that activity is adversely affecting park resources. National Wildlife Fed. v. National Park Service, 669 F. Supp. 384, 391 (D. Wyo. 1987) (citing cases). In fact, a long line of case law has made it clear that the Park Service must regulate public use of the parks in order to promote preservation objectives. See, e.g., Michigan United Conservation Clubs v. Lujan, 949 F.2d 202 (6th Cir. 1991); Mausolf v. Babbitt, 125 F.3d 661 (8th Cir. 1997); Organized Fisherman of Florida v. Hodel, 775 F.2d 1544 (11th Cir. 1985); National Rifle Ass'n ("NRA") v. Potter, 628 F. Supp. 903 (D.D.C. 1986).

As Congress has explained, "[t]he Secretary has an absolute duty, which is not to be compromised, to fulfill the mandate of the [Organic] Act to take whatever actions and seek whatever relief as will safeguard the units of the National Park System." Senate Rep. No. 528, 95th Cong. 1st Sess. 21 (1977) (emphasis added). Thus, for example, in Potter, the Park Service concluded that its long-standing authorization of hunting was inconsistent with the Service's preservation mandate, and prohibited hunting in the parks unless Congress required it. 628 F. Supp at 906. The National Rifle Association (NRA) challenged this regulatory shift, arguing that each park should be permitted to determine whether to permit hunting. Id. at 907. The Park Service in turn argued that its philosophy "has always been exclusively protectionist," and that the amendments to the Organic Act were a "pointed[ ] reminde[r]" to the Park Service to pursue that mission. Id. (emphasis added). The court agreed, finding that the Park Service's emphasis on preservation was entirely appropriate and consistent with Congressional intent. Id. at 912; see also Michigan United Conservation Clubs, 949 F.2d at 207 ("Notwithstanding that the goals of user enjoyment and natural preservation may sometimes conflict, the Park Service may rationally conclude, in light of the Organic Act and its amendments, that its primary management function is preservation unless Congress has declared otherwise.")

Similarly, given the documented adverse impacts of snowmobiles, a prohibition on such use in the National Parks would be entirely consistent with the Park Service's preservation mandate. Just as the Park Service prohibited hunting in order to comply with Congress's intent that these areas be protected, so must the Park Service prohibit snowmobiling in order to preserve the Parks and continue to fulfill its responsibilities under the Organic Act.

Indeed, Voyageurs National Park has already taken the first step, and thereby demonstrated the appropriateness and legality of such restrictions. See Mausolf v. Babbitt, 125 F.3d 661, 667 (8th Cir. 1997). In Mausolf, snowmobiling interests sued the Park Service for limiting the areas in the park available to snowmobiles. Although, unlike most other parks, Voyageurs has specific authorizing legislation concerning snowmobiles, see 16 U.S.C. § 160h, the Court of Appeals for the Eighth Circuit upheld the limitations, explaining that the agency "enjoys broad discretion in carrying out the mandates of its governing statutes." Id. In addition, the Court explained that the Park Service's actions support "specific regulatory objectives such as protection of environmental or scenic values' [and] 'protection of natural or cultural resources.'" Id. at 669 (emphasis added). A nationwide prohibition on all snowmobiling and trail grooming in the parks would also be fully justified under the Park Service's governing statutes and regulations. See also Northwest Motorcycle Ass'n v. Department of Agriculture, 18 F.3d 1468 (9th Cir. 1994) (upholding Forest Service's limitation on certain off-road-vehicle use).

Moreover, given the adverse impacts of snowmobiling, only by prohibiting these activities can the Park Service adhere to its guiding statutes and regulations. Indeed, the agency has recognized that "the management and administration of park areas must be in accordance with both the general laws relating to the National Park System and the more specific laws relating to the authorization and administration of a particular park unit." 48 Fed. Reg. 30252 (June 30, 1983).

As previously stated, Park Service policy (USDI 1988) also supports a ban on snowmobile use in National Parks.[26] This policy prohibits activities which "would involve or result in inconsistency with the park's enabling legislation...derogation of the values or purposes for which the park was established ... (or) unacceptable impacts on park resources or natural processes ..." (emphasis added). An impact is deemed "unacceptable" if it will impair "physical resources, such as wildlife and geologic features, and intangible values, such as scenic vistas and solitude." Id. at 1:3. Moreover, Park Service regulations prohibit snowmobiling if such use will "disturb wildlife or damage park resources." 36 C.F.R. §2.18(c). As documented earlier, snowmobile use in National Parks clearly meets and, indeed, exceeds these criteria, thus mandating that the Park Service either "mitigate the impacts" or "eliminate the activity." Id. at 8:1.

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[26] Park policy "originates in law" and is "based on the Constitution, public laws, proclamations, executive orders, rules and regulations, and directives..." (USDI 1988). Adherence to Park Service policies is "mandated" unless "waived or modified by an appropriate authority." Id.

Prohibiting snowmobiling would also be entirely consistent with the approach federal agencies have taken in recent years to handle similar problems in the National Parks. For example, the Departments of Interior and Transportation recently announced plans to curtail the degradation caused by too many cars in certain National Parks, such as by announcing that, in order to "preserve and protect" the Grand Canyon "for future generations," the federal government will "greatly restrict automobile use," as well as diesel buses, diesel and steam locomotives and outboard engines on river rafts. 61 Fed. Reg. 69,308 (Dec. 31, 1996). Similarly, the government has recently taken action to curtail the air traffic over Grand Canyon, recognizing that permitting these flights conflicts with the Park Service's duty to "preserve the natural environment." See 62 Fed. Reg. 1795, 1796 (Jan. 13, 1997). All the reasons that support these regulatory initiatives -- air and water pollution, noise abatement, wildlife protection, conflicts with other users, public safety -- fully apply to snowmobile use and trail grooming.

Finally, in addition to the repeated indications from Congress, the Courts, and from the Park Service itself that, in managing the National Parks, the preservation mandate should be the agency's highest priority, the American people themselves have recently made it clear that, in their view, the preservation of our National Parks must continue to be the paramount management objective of the Park Service. In a recent survey by the National Parks and Conservation Association, Americans rated the preservation of the National Parks' air and water quality, wildlife habitat, and natural ecosystems as immensely more important than utilization of the parks for recreation and tourism. Darla S. DeRuiter and Glenn E. Haas, National Public Opinion Survey on the National Park System, Executive Summary Report at 12 (Attachment 3) ; see also USA Today, February 19, 1998 ("For Parks' Sake, Enact Ban") (Attachment 4). Moreover, almost 70% believed the parks should be managed for future generations rather than present use. Id. at 13. In sum, then, prohibiting snowmobiles would be consistent with the long-standing mission of the Park Service, recent initiatives of this Administration, and the will of the American people.

B. SUWA v. Dabney: Mode of Access vs. Recreational Vehicle Use

The framework for the entire debate about winter use in the parks deserves clarification. The purpose of winter access to the parks is to provide visitors the opportunity to see and experience the sights and sounds of the parks. The mode of access utilized to transport visitors into the parks must be that mode least damaging to park resources and that which least degrades the experiences of other visitors. Mode of access must never be confused with a form of recreation. Once in the park, many forms of recreation are permitted, while many have been limited and still others disallowed in order to protect park resources. Snowmobiling as a form of recreation is obviously inappropriate for use in the parks for all of the reasons stated herein and references cited. Snowmobiles as a mode of visitor access to the park are similarly inappropriate and furthermore, no longer necessary as less damaging, mass transit oversnow vehicles are available and in use.

Yellowstone's first snowmobile 'policy', drafted in the early 1970s, stated that:

"Snowmobiling, per se, has no place in any natural area of the National Park System". Superintendent Anderson and his staff went on to say that snowmobiling on road surfaces are appropriate, as automobiles are in summer. Finally, the policy stated that the purpose of allowing snowmobiles "to enter Yellowstone is to provide an opportunity for winter visitors to see, and enjoy, the many wonderful natural features and wildlife that are present in the Park." (Yochim,1998, citing Harold J. Estey to Robert B. Ranck, Dec. 20, 1974. In Box W-129, File W42: "Special Regulations, 1973-5", YNP Archives, WY).

The District Court of Utah recently clarified that the Park Service is not in the business to provide recreational opportunities: protection of the resource comes first and all visitor access must be in harmony with preservation. (Southern Utah Wilderness Alliance v. Dabney (1998 WL 703956 (D. Utah)). At issue was the 'right' of four-wheel drive enthusiasts to recreate in sensitive riparian areas in Canyonlands National Park. The Court based its decision to deny continued access on the Organic Act.

The relevant provision of the Organic Act provides that the Park Service is to "regulate the use of" national parks by means that conform to their "fundamental purpose", namely: "to conserve the scenery and natural historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations". (Organic Act (16 U.S.C. §1a-1).

A provision added in 1978 prohibits the authorization of activities that derogate park values: The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which theses various areas have been established, except as may have been or shall be directly and specifically provided by Congress. (Organic Act (16 U.S.C. §1a-1)as amended by the 1978 'Redwoods Amendments')).

In Southern Utah Wilderness Alliance v. Dabney the Park Service argued "that they authorize a balancing between competing mandates of resource conservation and visitor enjoyment." The Court reminded the agency that "…the Park Service's mandate is to permit forms of enjoyment and access that are consistent with preservation and inconsistent with significant, permanent impairment." In a curt assessment of the motorized users' powerful lobby, the Court said "the Park Service noted "the proposal to close any road has touched a nerve in the four-wheel-drive community." The Court, however, was not sympathetic to the Park Service's attempts to mollify ORV user groups at the expense of law and regulation.

The Court went on to clarify the oft-cited Organic Act notion of "visitor enjoyment"; user groups attempt to broaden the concept of "visitor enjoyment" to denote a right to recreate in or access the parks in any way seen fit. The Court disagreed. "[V]isitor enjoyment" as used in the statute refers to visitor enjoyment of park scenery, wildlife, and natural and historic objects that are to be preserved. As used in this sense, visitor enjoyment does not refer to visitor enjoyment of outdoor recreational activities. Opportunities for outdoor recreation are provided on lands managed by the Bureau of Land Management and the Forest Service….[G]iven…the availability of less-invasive forms of access, permanent impairment…in order to permit the continued use [of four wheel drive vehicles in Salt Creek Canyon] cannot be reconciled with the Organic Act's overarching goal of resource protection."

The court went on to state that "Although this Court is not free to ignore the legislative mandates it is charged with applying, this Court has much sympathy for the elderly, disabled and others whose physical condition will not permit them to hike to Angel Arch." In this case, the Court prohibited all motorized access to prevent impairment of natural resources. In Yellowstone, the Citizens' Solution seeks merely to replace one type of access with another, which will in fact broaden access while protecting resources. Snowcoaches provide access for all classes of people, and currently are used largely by the elderly and families with children. Snowmobiles, on the other hand, do not provide for such broad access; the majority of snowmobile riders are adults, mainly adult males.

The Citizens' Solution, in firmly setting visitor access in line with resource protection, fulfills the intention of the Organic Act. The Park Service Preferred Alternative is inconsistent with the Court's ruling in SUWA v. Canyonlands. Adoption of the Citizens' Solution would allow the Park Service to comply with the spirit and intent of its enabling statute, the Organic Act.

C. Regulations

NPS regulations prohibit "disturbing" living wildlife from its "natural state". (36 C.F.R. §2.1(a)(1)(*i*). Regulations governing snowmobile use in national parks specifically prohibit such use "except where designated and only when their use is consistent with the park's natural, cultural, scenic and aesthetic values, safety considerations, park management objectives, and will not disturb wildlife or damage park resources." (36 C.F.R. §2.18 (c)) When such damage is known to occur, the Superintendent is authorized to "regulate, restrict, or close a portion or all of a Park area to all public use if such action is necessary to protect the environment or scenic values of the Park, [and to] protect natural resources..," 36 C.F.R. §1.5 9a) (1). The evidence of adverse effects of winter recreation on wildlife, air resources, natural quiet, and water quality demonstrates that the parks have not heeded regulatory guidance to prevent damage to park resources by prohibiting deleterious activities like snowmobiling.

Clearly, current snowmobile use of the park is in direct conflict with the Organic Act, regulations, and NPS policy guidelines. NPS Management Policy (USDI 1988) prohibits activities which "would involve or result in inconsistency with the park's enabling legislation...derogation of the values or purposes for which the park was established...([or] unacceptable impacts on park resources or natural processes..." (Policies at 8:3).

The stipulation in regulation to disallow disturbance of wildlife is coupled with Organic Act language to prevent impairment. Together, these affirmatively provide park resources with the utmost protection from disturbance and degradation. Whether an impact is determined to be unacceptable is based on whether it will "impair" the scenery, natural and historic objects, or wildlife of a National Park. The NPS interprets impairment to apply to "both physical resources, such as wildlife and geologic features, and intangible values, such as scenic vistas and solitude". (Policies at 1:3). A determination of "impairment" is based on the spatial and temporal extent of the impacts, the resources being impacted and their ability to adjust to those impacts, the relations of the impacted resources to other park resources, and the cumulative as well as the individual effects."" (Policies at 1:3). Under circumstances of impairment, the NPS must either "mitigate the impacts" or "eliminate the activity" (Policies at 8:1).

D. Executive Orders 11644 and 11989, Regulations and Case Law

Executive Order (EO) 11644 issued in 1972 was intended to provide a "unified Federal policy" for the use of off-road recreational vehicles (ORVs) on public lands. (Executive Order 11644, 37 Fed. Reg. 2877 (1972) reprinted in 42 U.S.C.§4321).

To accomplish these goals, the Executive Order directs agency officials to specify, through regulation, the areas and trails on public lands on which ORV use will be permitted. Those areas where ORV use is permitted will be based on, among other things, "the protection of the resources of the public lands," Id at §3(a), and shall "be located to minimize harassment of wildlife or significant disruption of wildlife habitats." Id at §3 (a) (2). Within national parks, such trails shall only be designated "if the respective agency head determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, or scenic values." Id at §4. The EO also requires agencies to establish a mechanism to monitor ORV use and impacts and to respond appropriately to such information. Id at §8.

In May of 1974, Yellowstone National Park designated trails upon which snowmobile use was permitted (39 Fed. Reg. 16151). The designated trails, the selection of which was allegedly "guided by the criteria in sections 3 and 4 of EO 11644" consisted of nearly all of the unplowed roadways.

In 1977, EO 11644 was amended by EO 11989. The amendment authorized "the respective agency head..., whenever he determines that the use of off-road vehicles will cause or is causing considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat..., [to] immediately close such areas or trails to the type of off-road vehicle causing such effects, until...such adverse effects have been eliminated and...measures have been implemented to prevent future recurrence." EO 11989 42 Fed. Reg 26959(1977) reprinted in 42 U.S.C. §4321. This closure authority must be invoked when the agency head has determined that ORV use may or will cause adverse environmental impacts.

In response to the original EO, in 1974, the Park Service issued a rule prohibiting snowmobiling in the National Parks, absent special regulation. 36 C.F.R. § 2.34 (1974). In 1979, the agency delineated the standard which governs such special regulations, determining that snowmobiling must be prohibited unless such use is "consistent with the park's natural, cultural, scenic and aesthetic values, safety considerations, park management, and will not disturb the wildlife or damage other park resources." 44 Fed. Reg. 47,412, 47,414 (1979) (emphasis added); see also 48 Fed. Reg. 30252 (1983) (reaffirming this standard); 36 C.F.R. § 2.18 (current codification of standard).

At the same time the Park Service issued these special regulations in 1979 to comply with the EO, it exempted snowmobile use on top of paved roads from the provisions of the EO. That is, despite admitting that the EO applied to snowmobile use in its 1974 rule, the Park Service summarily and inexplicably announced that the EO only applied where snowmobiling occurs in areas other than directly on top of existing roads used by motor vehicles during other seasons. This change in Park Service policy, which asserts that snowmobiles used on packed snow above existing roads are not considered to be off-road vehicles, is not consistent with the EO, since the EO was implemented to address off-road vehicle use on public lands without regard to where the off-road vehicles were used. Nonetheless, in issuing the 1979 rule, the Park Service continued to recognize that it cannot permit snowmobiling in any areas where this activity would conflict with the agency's overall mandate.

Even where such use is consistent with Park Service regulations, the Park Service determined that, given the inevitable adverse impacts of these machines and the trail grooming required to accommodate them, if "equally desirable [snowmobiling] opportunities exist on adjacent lands," then "snowmobile use is more appropriate on the adjacent lands which do not have the specific preservation mandate of the National Park Service." (44 Fed. Reg. 47,413 (1979)).

The Park Service appears not have heeded the intent of the Executive Orders or applicable regulations regarding monitoring of ORV impacts and subsequent amendment of park ORV policy. In National Wildlife Federation v. Morton (393 F. Supp.1286 (1975)), the D.C. District Court held that "wholesale blanket designation of 'open lands'" for ORV (including snowmobile) use, violated the express requirements of Executive Order 11644". In designating all Yellowstone park roads open for snowmobile use without fulfilling the criteria required by EO 11644, the Park Service has violated the intent of the Executive Order. Blanket designations of "open" do not follow the intent of the EO, which requires that all designations, whether open or closed, be based upon the criteria set out in the EO. As noted nearly thirty years ago by the Court, an open designation by the Park Service

> changes the character of the land use policy, tilting it in favor of ORV use. Future designations will not be made in the context of applying the required criteria to decide whether specific areas and trails should be opened or closed to ORV use. Instead, authorized officers will be required to employ the criteria in determining whether a specific area of trail's existing "open" status should be changed to "closed" or "restricted". This distinction creates a subtle, but nevertheless real, inertial presumption in favor of ORV use. (National Wildlife Federation v. Morton (393 F. Supp.1286 (1975)).

This is precisely the situation in which Yellowstone finds itself, following an arbitrary opening of all park roads to snowmobile use without following the intent of the Executive Orders or related regulations.

E. Park Management Policies

In addition to its regulations, the Park Service has adopted policies guiding its management of natural resources, air quality, noise, recreational activities, and other features of the National Parks (USDI 1988).

The primary objective of these policies is to manage natural resources to provide "the American people with the opportunity to enjoy and benefit from natural environments evolving through natural processes minimally influenced by human actions." Id. at 4:1. Thus, natural resources will be managed with a concern for "fundamental ecological processes...," id. (emphasis added), and Park managers will "try to maintain all the components and processes of naturally evolving park ecosystems, including the natural abundance, diversity, and ecological integrity of the plants and animals." Id. (Emphasis added).

Moreover, Park Service policies require that recreational use of parks be managed "so as to protect park resources, provide for public enjoyment, promote public safety, and minimize conflicts with other visitor activities and park users." Id. at 8:2. In particular, Park policy specifies that, unless a recreational activity is mandated by statute, the Park Service will not permit such activities if they would result in:

1. Inconsistency with the park's enabling legislation or proclamation, or be in derogation of the values or purposes for which the park was established;

2. Unacceptable impacts on visitor enjoyment due to interference or conflict with other visitor use activities;

3. Consumptive use of park resources;

4. Unacceptable impacts on park resources or natural processes;

5. Unacceptable levels of danger to the welfare or safety of the public, including participants. Id. at 8:3. (emphasis added).

As for snowmobiling, Park policy dictates that snowmobile use may be permitted in National Parks only on designated routes and water surfaces "in locations where there will be no significant adverse impacts on the park's natural, cultural, or scenic resources and values and in consideration of other visitor uses." Id. at 8:5.

The NPS revised its snowmobile regulations in 1979 (44Fed Reg 47,412). In an abrupt and complete reversal of its previous reliance on EO 11644 in designating snowmobile routes, the NPS declared that the restrictions of EO 11644 do not apply to the vast majority of snowmobile use in national parks. The NPS accomplished this result simply by re-defining most snowmobile use as not entailing ORV use. Specifically, the revised regulation states that: "Off-road vehicle use is not regarded as an appropriate use in the National Park System. Therefore snowmobiles will generally be permitted to operate on those established roads and on frozen waterways where other motor powered vehicles are allowed at other times. In those very limited places where off-road use of snowmobiles is permitted through Special Regulation, the provisions of EO 11644 and 11989 will be enforced."

Clearly, this new interpretation was designed to avoid compliance with the monitoring and mandatory closure provisions of EO 11644, as amended, by arbitrarily determining that snowmobiles are not ORVs when used on established roadways covered with snow. This is an inaccurate interpretation of the definition of an off-road vehicle in the EO. Contrary to the NPS interpretation, the definition of ORV in the EO is not intended to apply to where the vehicle is used, but rather, simply refers to a "a category of vehicle capable of cross-county travel on or immediately over land…snow…or other natural terrain." Id. at §2(3). This definition clearly applies to snowmobiles in the national parks.

Once again, if the provisions of EO 11644, as amended, applied to snowmobiling in Yellowstone National Park, as they clearly should, snowmobile use could absolutely not continue due to its impacts on wildlife, wildlife habitat, and adverse effects on the natural values of park.

VII. Grand Teton National Park

GYC supports many of the preferred alternative's actions for Grand Teton National Park. The closure of the Potholes area is long overdue to be made official, and snowmobiles should be phased out on Jackson Lake. Closure of all inner loop areas to motorized use will have significant benefits for the park. The proposed actions for the Continental Divide Snowmobile Trail (CDST), however, are extremely problematic and counter to current NPS regulation. The preferred alternative proposes to "separate auto use from snowmachine sue by moving CDST to a new pathway between Moran and Flagg Ranch." (DEIS, Table S-1).

Such a proposal to move a motorized trail off-road in a national park would require rulemaking to alter regulations promulgated following Executive Orders 11644 and 11989. NPS regulations state that "Off-road vehicle use is not regarded as an appropriate use in the National Park System. Therefore snowmobiles will generally be permitted to operate on those established roads and on frozen waterways where other motor powered vehicles are allowed at other times. In those very limited places where off-road use of snowmobiles is permitted through Special Regulation, the provisions of EO 11644 and 11989 will be enforced." (44 Fed. Reg. 47412).

Following these regulations, in order to relocate the CDST outside of the existing road corridor, Grand Teton National Park would have to draft special regulations to allow off-road snowmobile us. In so doing, Grand Teton would become the first park to allow off-road snowmobile use, setting a dangerous precedent. Such a proposal appears inexplicable given existing laws and regulations which are designed to protect the park's resources.

VIII. Cooperator Process

The use of local and state cooperators in the draft EIS was an abuse of that process and was an attempt to inject state and local authority over what by law and regulation must remain a federal decision. It became a process of political intimidation which weakened this NEPA effort.

NEPA provisions regarding cooperating agencies are clear: cooperators are those agencies that have jurisdiction by law or special expertise, and are intended to assist the lead agency in analyzing impacts and providing data. The purpose of including cooperating agencies is to increase the efficiency of the process, maximize coordination and cooperation, disclose

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impacts and eliminate duplication. Decision-making authority is retained by the lead federal agency, in this case, the National Park Service.

The Memorandums of Understanding (MOU) signed by state, local and other federal agencies designated responsibilities of the NPS, as the lead agency, and the cooperators. They also delineated the cooperators' specific areas of expertise, in this case, primarily socio-economic impacts.

From the very beginning, local and state cooperators attempted to assert themselves as decision-makers in this EIS process. GYC staff attended several cooperators meetings, received and commented on draft MOUs. We repeatedly raised concerns about the inconsistent and inappropriate role of the cooperators. These concerns included attempts by the cooperators to gain decision-making status; the expansion by cooperators into areas in which they do not have recognized expertise under the MOUs; including members of a private group as cooperator representatives; allowing irrelevant discussions about changing the Organic Act, and discussions regarding motorized uses of areas currently recommended for Wilderness.

We also vehemently object to a provision in the MOUs prohibiting the release of working documents outside a Freedom on Information request or similar state process. State and local cooperators are all participating as elected representatives. All documents available to the cooperators should and must be made available to the public. The NPS cannot prohibit elected officials from sharing public records. We object to the retention of this provision, and suggest it cannot be enforced.

Obviously, the cooperating agencies do not have an accurate understanding of cooperating agency status. The NPS did not clearly establish and follow the conditions under which cooperating agency involvement can occur. Far from improving the efficiency of the process and maximizing coordination and cooperation, this NEPA process has become contentious, exclusionary, and biased toward special interests (the local business communities) because of the local and state cooperating agency involvement.

If this precedent-setting arrangement is to continue effectively, efficiently and within the bounds of current statutes and regulations, the NPS must indicate clearly and concisely what those conditions are. The NPS must make it clear that it will solely retain decision-making authority in this winter use planning effort.

IX. Economics

National parks are not islands, and as a result, changes in park management will have implication, both positive and negative, for persons who work, recreate, and live in or near Yellowstone National Park. NPS policy imposes a mandatory duty on the NPS to "anticipate, avoid, and resolve potential conflicts" with others "to protect park resources, and to address mutual interests in the quality of life for community residents, considering economic development as well as resource and environmental protections." (Policies at 2:9) However, the parks must not feel pressured to permit snowmobiling based solely on the economic benefit to local communities. NPS policy dictates that such alleged "beneficial effects" must be consistent with overarching "policies and management objectives". (Policies at 2:9-10).

Much of the protest to any reduction in snowmobiling by the gateway communities is focused on potential economic impact. In some cases, the counties have suggested very extreme scenarios, like the complete elimination of all snowmobiling on public lands or all park winter use, to illustrate impacts. In fact, snowmobiling will not be completely eliminated, even if it not allowed within the parks. And winter use of the parks is not proposed to be prohibited. As other information in these comments notes, there are thousands of miles of snowmobile trails within the three-state region, outside the parks.

It is difficult to predict how visitors might respond to the closure of the parks to snowmobiling. Certainly, people will continue to come, and there is the possibility the same numbers of people will come, but simply use the snowcoaches rather than snowmobiles. This is particularly the case if the parks make a concerted effort to make snowcoach travel affordable, comfortable and enjoyable. It is also possible that equivalent numbers of snowmobilers will come to the region, and will spend similar amounts of time in the region, visit Yellowstone National Park in snowcoaches. Other winter users may also still come to the region, and may come in even greater numbers as user conflicts are reduced.

According to the 1999 survey of visitors on both park and national forest lands, over half (52%) the park visitors snowmobiled or skiied in places other than Yellowstone National Park during their visit; 64% of these did so for two or more days - primarily in Gallatin County. This is down from 62% of park visitors who recreated outside the parks according to a 1996 survey. Forest recreationists spent an average of 15% more per trip compared to park visitors, and 34% more per trip within the GYE than park visitors. In addition, forest recreationists spent twice as many days snowmobiling and cross-country skiing than park visitors, there were more repeat visitors to the GYE among the national forest recreationists, and they spent most of their time on the national forests. This would suggest that gateway communities are underestimating the economic impact of national forest visitors.

A reduction in snowmobiler visitor numbers or a shift in visitation patterns is also possible. The possible reduction or shift, however, is not the responsibility of the parks. The parks' responsibility is to ensure that the resources are protected, and to allow visitation in a manner that does not compromise those resources. That protection has not occurred and resources have been compromised, as noted elsewhere in these comments.

The economic impact of snowmobiling to local economies appears to have been overstated in many of the studies completed by cooperating counties. For example, Yellowstone Park visitation figures indicate that only 3 percent of winter visitors came through the East entrance. The actual number has been declining, and last winter was just under 3,000. A 1999 report titled *The Economic Importance of the Winter Season to Park County, WY* estimates the economic impacts of a prohibition on winter visitation, something which has not been proposed in any alternative. Interestingly, in the 1999 survey of park and national forest visitors, the use of Shoshone National Forest and other sites to the east were not even mentioned as locations for their recreation by park visitors who snowmobiled or skiied in areas other than the park during their visit. According to the 1999 visitor survey, if the roads were closed entirely on the east side of the park, the largest proportion of both national forest and national park visitors said they would not change their number of visits, and between five and eleven percent said they would increase their visits. Even under a road closure for the east side and snowcoach-only recreational motorized access as proposed in the Citizens' Solution, there is no prohibition on winter recreation, and certainly, Park County businesses would continue to receive revenues from park visitors.

The 1999 survey also provides data on visitation patterns for winter recreationists which suggests counties may have other challenges in meeting recreationists' needs. For example, only 29% of Yellowstone National Park visitors also stopped in Livingston, and 64% visited Gardiner. They spent almost as many nights in Bozeman - 80 miles away by highway - as in Gardiner - five miles away - and more nights in Big Sky and West Yellowstone than in Livingston. Park County, Montana, communities are for some reason not currently appealing to these visitors. According to a Yellowstone National Park list of businesses permitted to provide specialized winter services in Yellowstone, no Park County businesses are permitted to provide guided skiing, snowcoach, or snowmobile services, which may be a factor. Bozeman, on the other hand, hosts five guided skiing businesses, and West Yellowstone is home to four of the five snowcoach permittees and seven of the 21 snowmobiling permittees. Lack of diversity may be a factor affecting economic returns for certain gateway community businesses, and could be addressed by these businesses as a way to meet the challenges of snowmobiling prohibited in the parks.

X. Public and park values

The Citizens' Solution proposes to restore the natural winter character to Yellowstone and Grand Teton national parks. This position is supported by various surveys of public attitudes as well as by a review of the specific values of Yellowstone and Grand Teton national parks as ecological baselines.

A. Public values and attitudes

Most of the surveys referenced here were of park visitors, while one included an opportunistic survey of visitors on adjacent national forests. Consequently, these surveys provide a woefully incomplete reflection of how the national or even the regional public feels about visitor use of these two national parks. (The DEIS, p.90, mentions there is at least one incomplete survey that targets people outside park boundaries). It should be acknowledged that the current surveys are generally heavily biased by their focus on existing winter and snowmobiling visitors. Obviously, if a survey is limited to park visitors, and 60% of those visitors snowmobile in the park, results are going to be heavily weighted to that snowmobiling viewpoint, particularly on questions about whether snowmobiles should be eliminated.

The surveys ignore the people who are no longer visiting the parks, perhaps because of negative impressions and experiences. A variety of these dissatisfied winter visitors testified at the DEIS public hearings. See also, for example, the Teton County, Wyoming, survey, noted below, where a greater percentage of non-visitors felt snowmobiles had a negative impact on the park than visitors. We have attempted to highlight some of the survey findings, keeping this bias in mind.

There is certainly broad recognition of snowmobile impacts, and support for changing existing uses. See, for example, the survey of Teton County, Wyoming, residents, some of whom had not visited either Yellowstone or Grand Teton National Park in the last year. In that survey, 52% of YNP visitors and 56% of nonvisitors felt snowmobiles negatively impact Yellowstone in the winter. Of these, 66% felt they are too noisy, 44% believed they affect air quality, and 39% felt they disturb wildlife. [27] In addition, 51% of YNP users and 61% of non-users felt snowmobiles should be limited.[28]

The Teton County Public Opinion Survey provides some indication of the dissatisfaction among residents with the heavy snowmobile emphasis in Yellowstone National Park, and the split among local visitors and nonvisitors. While only about 14% of the respondents who had not visited Yellowstone in the last year mentioned that one of the things they liked about the park was snowmobiling, more than one in three mentioned something they did not like which was associated with snowmobiling, including snowmobiling itself, snowmobile traffic, snowmobile noise, snowmobile air pollution and crowding. Even for those who had visited Yellowstone National Park in the last year, more respondents mentioned disliking something about snowmobiling than mentioned liking snowmobiling (44% vs. 38%).[29]

The results for Grand Teton National Park are even less supportive of snowmobiling. Less than 4% of people who had not visited Grand Teton in the last year specifically mentioned liking snowmobiling, compared to about 10% of park visitors.

According to a 1998-9 winter visitor survey[5], while there is support for continued mechanized winter access to Yellowstone, there is less support among residents than nonresidents: Less than 60% of park visitors from the GYE support continued mechanized access.[30] This suggests that residents may feel less tolerant of the use of the parks as a snowmobile playground, particularly if they have visited Yellowstone. As the DEIS notes on p.91, the 1999 winter visitor survey showed that 39% of in-region winter visitors favor either ski and snowshoe only, or ski, snowshoe and snowcoach access.

Although visitors said that the desire for tranquillity, solitude, peace and quiet, and to get away from crowds are all relatively very important with respect to their visit to Yellowstone, they also said that they were fairly dissatisfied what the park offered in these areas. [31] A 1996 survey found that visitors placed similar importance on quiet and solitude: 69% said quiet was extremely or very important; 67% said solitude was extremely or very important.[32] These objectives are not being met under current uses with the predominance of loud, polluting snowmachines.

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[27] Teton County Public Opinion Survey Report, Sept., 1998, Morey and Associates, p.10.
[28] Ibid, p.11.
[29] Teton County Public Opinion Survey Report, Sept., 1998, Morey and Associates. p.10.

[30] Duffield and Neher, September, 1999 draft report, Winter 1998-99 Visitor survey, YNP, GTNP, and the GYA: Analysis and Results, pp. 31-34
[31] 1999 report on Jan-Mar 1998 Borrie and Freimund survey of winter visitors, pp. 52-53.
[32] 1996 survey

B. Park Wilderness

In 1973, the NPS endorsed wilderness designation in order to provide the natural, near-pristine environment mandated for Yellowstone.[33] The analysis of the wilderness proposal stated that such a designation would allow visitors a primitive experience in one of the largest wilderness areas in the lower 48 states. "(T)he sense of solitude and quiet that typifies this region will remain always available to those willing to take the necessary time and effort."[34]

It also stated that the wilderness designation would "retain the primeval character of the area and provide an enduring resource of wilderness, assured of protection from the probability of administrative decisions."[35] The NPS recognized that it would face pressures to develop Yellowstone National Park in ways that would threaten the natural environment, and knew that wilderness designation would, or at least should, prevent some of those developments from occurring. It anticipated forever excluding the intrusion of the sounds of vehicles "and other cacophony of man's modern world." [36] Rather than look at it as a detriment, the NPS felt wilderness designation offered invaluable scientific and educational opportunities as the visitors are exposed to this wilderness and to the chance to relate themselves to their environment. These included the mental and physical challenges of wilderness and the respite offered as an escape from the stress-provoking conditions of daily life.

The 1973 master plan for Yellowstone National Park puts the issue another way that still has pertinence today: "Challenge in some degree is a fundamental ingredient of a wilderness experience. . . The visitor must be made to see that if Yellowstone's unique wilderness essence is to survive, he must be willing to accept nature on her own terms, rather than his own . . ." (p.25). While the Master Plan acknowledged the 'rapidly emerging phenomenon of winter use,' it too, failed to recognize the conflict between snowmobiling and the quality of the wilderness experience. We advocate reducing and eliminating outside sights and sound in wilderness and potential wilderness. Congress has clearly stated in the 1978 Endangered Wilderness Act, however, that outside sights and sounds should never be used as ciriteria to preclude an area from wilderness.

The Yellowstone National Park wilderness recommendation proposed ten roadless areas totaling over 2 million acres, over 90% of the park area. Wilderness designation was supported by 90% of the individuals, organizations and agencies that commented on the proposal, and 78% overall supported more wilderness than the NPS had originally suggested. The 1988 NPS Management Policies state that wilderness management policies apply to categories of designated wilderness, potential wilderness and recommended/study wilderness, and these policies apply regardless of category.

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[33] See Final Environmental Statement, Proposed Wilderness Classification, YNP, WY, NPS/USDOI, 1973, and Wilderness Recommendation, YNP, USDOI/NPS, 1972.

[34] Final Environmental Statement, Proposed Wilderness Classification, YNP, WY, NPS/USDOI, 1973, p.4.

[35] Ibid, p.14.

[36] Ibid.

The environmental assessment for the proposed snowmobile closure within the core of Denali National Park stated that among the potentially damaging effects of snowmobiles are: diminished wilderness values, including natural quiet, solitude, and undisturbed vistas that are the foundation of the experience for the historic winter users of the park. It is time for the managers of Yellowstone and Grand Teton national parks to similarly acknowledge the damaging effects of snowmobiling on those parks' wilderness experience, natural quiet and solitude, and take action to remove those impacts.

C. The Winter Use Planning Process

This EIS and winter use decision is long overdue. The potential impacts of snowmobile use was recognized almost 30 years ago, but have been allowed to continue unabated since then. The 1972 FES on the Proposed Wilderness Classification for YNP noted that because of the significant increase in oversnow machine use in the park, almost doubling in three years, an interdisciplinary research program was being planned at the Yellowstone Environmental Study Center, a cooperative research unity between the NPS and the University of Wyoming. One of the main concerns noted then was the effect of snowmobile use on the wildlife populations, especially elk, deer, moose and buffalo, in their previously undisturbed winter range. Virtually nothing has been done since then to measure or stop those impacts.

D. Snowmobiles

Yellowstone National Park began grooming roads as a way to keep snowmobilers from traveling cross-country as roads became bumpy from use, and subsequently hazing or chasing animals. Other parks, however, have banned snowmobiling, and continue to ban them and Yellowstone and Grand Teton national parks need to follow their lead.

The Denali example

Currently, two million acres within the core of Denali National Park is under judicial review for re-instatement of a snowmobile ban. The reasons for the ban are similar to those in Yellowstone. According to Bob Barbee, NPS Alaska Regional Director, and former superintendent of Yellowstone National Park, "Keeping this portion of Denali closed to snowmobiles would prevent detriment to the inherent resource values, including wildlife and wilderness, and would provide opportunities for solitude and non-motorized winter activities." Among the potentially damaging effects of snowmobiles cited in the draft environmental assessment for Denali are:

- The degradation of pristine air and water quality which currently exist within the core of Denali. The harm would be due to dirty exhaust emissions from two-stroke engines, the deposition of emissions in the snowpack, and alteration of the water chemistry of streams and rivers due to unburned hydrocarbons from incomplete fuel combustion.
- Damage to vulnerable soils and vegetation.
- Changes in animal behavior, including abandonment of preferred habitat and distribution pattern changes.
- User conflicts between snowmobile users and non-motorized recreationists such as cross-country skiers.
- Diminished wilderness values, including natural quiet, solitude, and undisturbed vistas that are the foundation of the experience for the historic winter users of the park.

The Denali snowmobiling closure notice stated that it was being done to prevent harm to park wildlife, wilderness, and other values[37] That closure, which was effective immediately, is in place for twelve months while the NPS issues draft regulations regarding snowmobiles and other Denali activities. It allows the NPS to meet its legal obligations to make sure that any new activity or any changes in the level of existing activities will not have a detrimental effect on resource values that are to be protected for future generations. According to Denali Superintendent Steve Martin, "This action prevents harm to park values, including wildlife, wilderness and other natural resources, opportunities for quiet and solitude and the undisturbed conduct of non-motorized activities...The possibility of extensive and expanding snowmobile use in Denali presented a threat to one of the most important ecosystems and wilderness resources on earth. We've seen that snowmobile users can quickly move into new areas and reach a high density. The potential for such rapid change places extremely important resources, such as caribou, bears, wolves and the prey they depend on, at risk."

There are similar values in Yellowstone and Grand Teton. Snowmobiles should be removed from these parks.

1. Public safety

As previously stated, according to the Park Service 1988 Management Policies, unless an activity is mandated by statute, the Park Service will not allow a recreational activity in a park or in certain locations within a park if it would involve or result in "unacceptable levels of danger to the welfare or safety of the public, including participants." (Policy at 8:3).

The Park Service is thereby required to make the park experience a safe one. Indeed, "the saving of human life take[s] precedence over all other management actions." (USDI 1988 at 8:5). Many park regulations (i.e.,speed limits, prohibitions on feeding wildlife) are designed to promote safety. These regulations are enhanced by educational campaigns conducted to remind park visitors that National Parks are not amusement parks, and that care must be taken to avoid injury.

Unfortunately, snowmobiles remain incredibly dangerous machines. Despite the promulgation of regulations establishing speed limits and requiring driver licenses for snowmobile operation, requiring licenses, snowmobile safety statistics for the past several years paint an alarming picture. For example, snowmobile accidents in Yellowstone increased 61% from 1988-1995. Over the last five winters, 535 people were killed on snowmobiles in the upper Midwest. In 1998, 32 people died in Minnesota alone. Nationally, 15,000 people were sent to the hospital for snowmobile related injuries. In Yellowstone over the last three years, snowmobiles were involved in 67% of park-wide motor vehicle accidents despite representing less than five percent of all motorized vehicles using the Park.

A recent study in Alaska by Dr. Michael G. Landen of New Mexico State University found that people who snowmobile frequently are almost nine times more likely to suffer death or injury in accidents than automobile drivers. (See, "Snowmobiles Pose Fatal Risks, United

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[37] NATIONAL PARK SERVICE MORNING REPORT To All National Park Service Areas and Offices From: Division of Ranger Activities, Washington Office, John Quinley, PIO, ARO, 2/4, February 5, 1999.

Press International, January 11, 1999). In northern Alaska, snowmobiles are the leading cause of death. Landen's report confirms that snowmobiles cause an extremely disproportionate number of casualties, especially because on-road vehicles are driven an estimated 53 times as many miles as snowmobiles in Alaska. Moreover, Dr. Landen discovered that sixty-five percent of Alaskans killed in snowmobile accidents were intoxicated and fifty-eight percent of the deaths involved hitting a natural object, such as a boulder or river.

Excessive speed is responsible for many snowmobile accidents. The top speed of several new models exceeds 100 MPH, and the horsepower and acceleration of some models exceeds that of many automobiles. Horsepower to weight ratios are equal to or higher than any other class of motorized vehicles manufactured today.

Excessive horsepower leads to reckless operation. Snowmobile operators are often observed traveling dangerously fast on narrow trails despite numerous obstructions and obstructed visibility. High speed collisions with fixed objects is the leading cause of accidents, with head injuries the leading cause of death. Improbably, drowning is the second leading cause of death.

A study by the Mayo Clinic in Minnesota documented an increasing number of severely injured snowmobilers in the last several years (Farley et al.,1996). Of the 42 patients admitted to the clinic due to snowmobile accidents from January 1, 1991 to May 1, 1993, 38 were men and 4 were women. Nearly 90 percent of the accident victims were younger than 40 years, less than 50 percent were wearing helmets at the time of the injury, and many were drinking. The injuries sustained included bone fractures, blunt abdominal trauma, closed head injury, lacerations, hypothermia, and frostbite. Complications, particularly due to infection, occurred in many patients. Though only one of these patients died as a result of the snowmobile injuries, the medical and emotional costs of healing the wounded was excessive.

Yellowstone experiences many snowmobile accidents each year. During the 1997/98 snowmobile season there were a total of 41 snowmobile accidents in Yellowstone. The causes of these and past accidents include excessive speed, collision with other snowmobiles, reckless driving, driving while intoxicated, collision with trees, and collisions with animals, including Yellowstone bison. The costs to the park resulting from snowmobile use is large, and personnel requirements considerable.

In Yellowstone, for example, Ms. Lucie Hanusova, a world champion caliber skier from the University of Colorado, was killed in the park during early January 1999 when she lost control of her snowmobile and it struck a tree. ("Snowmobiler Dies After Hitting Tree," Bozeman Daily Chronicle, 1/12/99). Excessive speed, however, was not a factor in this accident. According to an accident report prepared by Yellowstone rangers, the snowmobiler failed to correct a drift in course, left the park road at modest speed and struck a tree. We believe that in similar types of accidents, the extremely high levels of Carbon Monoxide (CO) discharged by snowmobiles impairs the operator's ability to control the vehicle, and may therefore be responsible for many injuries and deaths nationally.

Considering the documented danger of snowmobiles and park policy which emphasizes the protection of humans using National Parks, a ban on these machines as requested in this petition is both of significant benefit to the ecology of the park and to public safety. There are significant concerns about snowmobile safety which also suggest that such machines are inappropriate for Yellowstone National Park. According to the DEIS, about 70% of all park visitors use rented snowmobiles, and 85% of the snowmobiles involved in motor vehicle accidents were rented. Snowmobiles involve a greater proportion of incidences requiring ranger assistance than their visitation constitutes: they were involved in 243, or 94% of, accidents, compared to 61% of overall winter use over the last three winters (p.97). Eighty-five percent of citations were issued to snowmobilers during that period (p.101), primarily for speeding. Loss of control was a major factor. Snowcoaches, meanwhile, were involved in six accidents, or 2% of accidents compared to 10% of overall use.

The DEIS, p. 100, also notes that 5% of snowmobile accidents from 1995-1999 involved visitors between 10-15 yrs. of age. Since only licensed drivers are allowed to drive a snowmobile in Yellowstone, these youth are likely coming in as passengers, and then being allowed to drive the snowmobile once inside the park. The safety of visitors and park staff who must assist these visitors is of concern. Visitor access in the parks must be the safest possible, both for visitors and for staff responsible for visitor health and safety. The human and financial resources required to support snowmobiling in the park, and its concomitant risks, places a significant burden on park personnel, available resources and budgets.

E. Access

One of the objectives of the Citizens' Solution is to restore the natural winter environment, while providing appropriate recreational access to the parks in winter in a way compatible with the wildland nature of Yellowstone and Grand Teton. The Citizens' Solution would meet this objective by providing over-snow access by snowcoaches only. Similar group transportation systems are already in place in Denali National Park and will be soon in Grand Canyon, Yosemite, and Zion National Parks. Such a system should be established in Yellowstone as well. It will result in far less vehicle miles traveled and consequently far fewer impacts with wildlife. Administrative access via snowmobile would be allowed.

If one assumes, under our snowcoach alternative that there is a snowcoach every five minutes with about 12 people per snowcoach, a maximum of about 1400 people could be accommodated daily. This contrasts with the current level of 1500 snowmobile visitors daily (on about 1200 snowmobiles). It is likely that a five minute headway is not sufficient to maintain quiet and prevent crowding, therefore fewer snowcoaches, and fewer visitors, may be accommodated.

This same assumption would result in a maximum of about 120 snowcoach trips per day; 120 round trips of 60 miles between West Yellowstone and Old Faithful results in 7200 vehicle miles traveled in a day along this route, compared with 72,000 snowmobile miles under current conditions, a 90% reduction in vehicle miles traveled along this route, while providing access for the same number of visitors.

GYC also believes that improved snowcoach travel can provide much better opportunities for certain segments of society that currently visit the park in winter in very low numbers, and for group travel. Currently, most Yellowstone National Park winter visitors are male; just over one-third of Yellowstone and Grand Teton visitors are in family groups; and groups of six or more comprised 37% of Yellowstone visitors.[38,39] This is consistent with earlier surveys that found that only about 8-10% of visitor groups included children, and there was a similarly relatively small number of older visitors.[40]

F. Carrying Capacity, Facilities and Services

The Citizens' Solution proposes that a carrying capacity for winter visitor levels be developed for winter use in Yellowstone and Grand Teton National Parks. In the meantime, GYC supports limiting winter recreational use to no more than the average visitation over the last six years. The Citizens' Solution does not support any expansion of winter services or facilities, and anticipates that with the implementation of group transportation, some facilities such as fuel dumps may no longer be needed and could be removed.

Under the Citizens' Solution, the capacity of the snowcoaches will likely determine overall winter use capacities, which could be about 1400-1800 people per day (see above discussion). While there are limited overnight accommodations at Old Faithful (222 beds/136 rooms), day use is not limited. Winter parking capacity at Old Faithful is driven in large part by the 150 parking spaces, which provide more space than that at Flagg Ranch. The development of the new sewage plant at Old Faithful, the area which experiences the heaviest use in the park, is expected to easily accommodate the 1400-1800 people per day level of use, so does not appear to be a limiting factor. Consequently, the capacity of snowcoaches to safely transport people would have the greatest impact on winter visitor numbers.

The NPS is required to address carrying capacity in parks. This obligation is a recognition that the NPS is faced with goals in conflict -- that of protecting the resource, while also providing for visitor access. GYC feels strongly that the goal of protection must constrain that of access, but need not eliminate access. The challenge is to determine what recreational access can be accommodated while maintaining those resource conditions.

Yellowstone and Grand Teton national parks intend to use the Visitor Experience and Resource Protection (VERP) planning process for determining carrying capacity, a public process adopted by the NPS for system-wide use. It has been used in Arches National Park. It is our understanding that the VERP process may result in a separate winter visitor management plan, or an amendment to the existing plan. The current winter use plan and decision will constrain options considered through the VERP process, as will other decisions, such as the commercial services plan.

The VERP process defines visitor carrying capacity as the type and level of visitor use that can be accommodated while sustaining the desired conditions for resources and the quality

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[38] DEIS, p. 91

[39] 1999 survey

[40] 1996 survey (done in 1995), p. 6. Bath, pp. 99, 103.

of visitor experience that meet park purposes. It also includes developing indicators and standards to ensure resource protection and provision of the desired visitor experience; monitoring and identifying variations from desired conditions; and taking management actions to achieve the desired condition.

While it would have been more efficient to have completed the VERP process prior to this winter use plan, the fact is that the NPS has allowed winter use, and snowmobiling in particular, to escalate far beyond its ability to ensure resource protection. Past responses to increasing visitation have often tended to take actions such as to harden sites and increase facility capacities and infrastructure. Yet significant impacts are occurring, and as the VERP handbook (as well as common sense) advises, it is better to take action to protect resources than to do nothing because of incomplete information. That necessary action, we firmly believe, is to eliminate snowmobiling from the parks and provide for more appropriate motorized recreational access through snowcoaches. The subsequent VERP process should be based on this foundation.

As additional support for this position, we would like to point out that one requirement of VERP is to assess the diversity of experiences available throughout the region, and whether certain types of activities, or experiences, can only occur within the park. Clearly, snowmobiling opportunities are available on hundreds of miles of trails within the Greater Yellowstone region outside the parks, and thousands more miles of trails throughout the states of Montana, Wyoming and Idaho and beyond. A snowcoach opportunity, however, is unique and totally appropriate to Yellowstone and Grand Teton national parks. It should provide the opportunity - and the constraint - for the upcoming carrying capacity planning process.

There is, however, apparently no timeline for initiating this process at YNP and GTNP. Certainly, some of the surveys and research that have been conducted will provide important data. We urge the NPS to begin that process immediately, and in particular, to ensure that the necessary inventory of existing conditions is conducted in a timely manner.

G. Recreational Opportunities on Adjacent Lands

There are many opportunities for recreationists to enjoy winter both inside and outside the parks. According to the DEIS, Fremont County, ID, hosts 400 miles of regularly groomed snowmobile trails; 300,000 snowmobile user days/yr and 40,000 days of other winter recreation. Information from the GYCC indicates that the West Yellowstone area has about 160 miles of groomed trails, enjoyed by about 90,000 snowmobilers each year. Many of these snowmobilers never visit Yellowstone Park. The Targhee grooms up to 500 miles of trails, and has 140,000-150,000 snowmobile visits. The state of Wyoming maintains over 2,000 miles of snowmobile trails, with over 50% located within the Greater Yellowstone area. Increasing use is being felt elsewhere as well.

It is clear that in many areas outside the parks, snowmobiling is and will continue to be a prominent wintertime activity. There is little basis for the argument that snowmobiling must continue in the parks when so many opportunities for snowmobiling exist outside the parks and elsewhere within the three states and the rest of the region. Most important, the Parks must not hesitate to make a decision to eliminate snowmobiles based on concerns about increased pressure on adjacent lands. Snowmobile use on adjacent forest lands is already occurring at high levels, and the Forests must undertake winter use planning similar to the parks' effort.

XI. Conclusion

Our National Parks were not created in order to serve as national playgrounds, available for any and all uses. They were created to preserve "nature as it exists," H. Rep. No. 700, 64th Cong., 1st Sess. 3 (1916), affording the American people and people worldwide an unparalleled opportunity to see, hear and experience these national treasures in as natural a state as possible. There are more than enough areas, both on and off federal land, where snowmobiling can continue. But our unique and irreplaceable National Parks should not be among those areas. Therefore, we request that the Park Service craft a final preferred alternative which reflects the components of *The Citizens' Solution for Winter Access to Yellowstone*.

In keeping with the progressive vision of the National Park Service, Yellowstone and Grand Teton must formulate a means of visitor access with does not impair resources. A mass transit approach is the only solution. Two-stroke vehicles must be immediately eliminated from the parks, as their levels of pollution and noise are fundamentally at odds with park mandates and wholly inappropriate for use in the parks. Furthermore, individual recreational snowmobile use is inappropriate for use in the parks regardless of pollution levels. According to law and regulation, winter visitors may be provided access to the parks only by the most appropriate means available. Currently, snowcoaches represent that method. The challenges of increased winter visitation and concomitant impacts will not disappear. The parks must take proactive, preventive action and implement a group travel system which allows people to view the resources without impairing those same resources with their mode of access.

The Park Service must take a hard look at the effects of road-grooming on bison and other wildlife. The absence of any control studies of ungroomed road surfaces has done a disservice to the public debate and potentially further imperiled wildlife in winter. Data insufficiencies in the realms of air quality, water quality, noise and natural quiet must also be remedied. The park must establish baselines in order to monitor degradation. This Winter Use EIS is long overdue and insufficient in many respects. The Preferred Alternative will not address the litany of impacts the parks currently are degraded by. The Park Service must adopt a final preferred alternative which immediately fulfills the intention of park law, regulation and policy to preserve park resources in perpetuity.

GREATER YELLOWSTONE COALITION
Page 4. Re: Adaptive management is not a mechanism to put off or delay important decisions as the commenter suggests. Adaptive management is a process by which management actions are implemented based on the best available information and are tested as a hypothesis using an identified monitoring program. It is the nature of the decision that is in question. It has been the Park Service's intent from the beginning of the process to prepare a programmatic plan (§1508.18(b)(2) and (3)). This would be the purpose of preparing a "comprehensive EIS." There should have been no illusions that a plan of this magnitude would be based upon detailed, site-specific data in order to make every decision possible relating to winter use. This programmatic approach is acceptable under the law, in the way that NEPA is the vehicle for producing NPS General Management Plans and USFS Forest Plans, and amendments thereto. Such documents do, in fact, make decisions and allocations at a general level and defer many site-specific types of decisions to a later date. In this context, it is also acceptable to spell out processes that would be followed, such as adaptive management, as alternative features. It will be up to the decision-maker to weigh the available data, the possible impacts of such alternatives in the short term, and decide if park resources and values are sufficiently protected.
Page 4. Re: Guiding laws and regulations. NEPA (CEQ Regulations) does not stipulate the rationale for selecting a preferred alternative in an EIS. It stipulates that in a final EIS, a preferred alternative must be identified. The statement of preference for one or more alternatives in a draft EIS is discretionary, depending upon whether the agency has a preference at that point (§1502.14(e)). The identification of a preferred alternative in a DEIS should be regarded by the public as extremely tenuous. This is because an EIS is to serve as a means of assessing impacts of proposed agency actions "rather than justifying decisions already made" (§1502.2(g)). The FEIS preferred alternative may be viewed more as a "precursor" decision, which will only become final in a Record of Decision that expresses the rationale for the choice. In any case, it is clear that merely the expression of a preferred alternative, by itself, can in no way invalidate the entire EIS analysis. The decision maker can select any of the proffered alternatives in a Final EIS through consideration of a variety of factors, including but not limited to environmental impacts. The selected alternative does not have to be the most environmentally preferable alternative, which must also be revealed in the decision document.
Page 5 and 6, 7-9. Re: The Citizens' Solution for Winter Access to Yellowstone. The proposed "Citizens' Solution" is not significantly different from alternative G as presented in the DEIS, especially considering the programmatic nature of the proposed action. See the matrix comparison of "The Citizens' Solution" versus the features analyzed in the range of alternatives. This may be found in Chapter I of the FEIS under Alternatives Suggested During the Public Comment Period. All alternatives in the DEIS meet the purpose and need for action to a greater or lesser degree.
Page 9. Re: Failure to act immediately. There has as yet been no legal finding that snowmobiling violates any of the mandates described in the purpose and need section. Montana DEQ points out that there has been no actionable violation of Montana or Federal clean air standards. Where standards have been approached, West Entrance and Flagg Ranch, there clearly needs to be some action taken with respect to health and safety. Pollution levels throughout the park units do not approach this level. Class I air quality in the remainder of the park units has less to do with health standards and more to do with park values (visibility, odor) for which no specific standards exist. The eventual decision will, through a finding, provide direction on the issue of derogation of park values, and an appropriate implementation period will be selected.
Page 10. Re: Airborne toxins created by 2-stroke engines. That PAH and other toxic elements are included in emissions from 2-stroke engines is disclosed in the DEIS, page 163 et al. The information in the DEIS will be reviewed and enhanced as appropriate for the final document.
Page 10. There is no requirement in CEQ regulations (§1502.14) to justify a preferred alternative, just to name one or more alternatives as preferred in the DEIS if there is a preference. The agency must express a preferred alternative in a Final EIS. It appears many commenters place too much emphasis on the alternative designated as preferred in the DEIS. This designation is tenuous at best. Under the CEQ regulations, the requirement in an EIS is to provide a range of reasonable alternatives that clearly define the issues, and to fully evaluate and disclose the possible effects of those alternatives. The DEIS meets this requirement.

GREATER YELLOWSTONE COALITION
Pages 10-12. Re: Current air quality degradations within the parks warrant stronger action. Information provided on pages 10-12 of the letter relates to snowmobile emissions. Much of this information is either stated or cited in the DEIS. Due to work that has been ongoing since publication of the DEIS, air quality analysis in the FEIS will be updated.
Pages 12-13. Re: Snowmobile emissions. Information provided on pages 12-13 of the letter relates to snowmobile emissions. Much of this information is either stated or cited in the DEIS. Due to work that has been ongoing since publication of the DEIS, air quality/public health analysis in the FEIS will be updated.
Pages 14-15. Re: Legal and policy requirements. Legal and policy discussion: NPS is fully cognizant of its mandate and policy requirements, as reflected in the purpose and need section of the DEIS. There has as yet been no legal finding that snowmobiling per se violates any of the mandates described in the purpose and need section. Montana DEQ points out that there has been no actionable violation of Montana or Federal clean air standards. Where standards have been approached, West Entrance and Flagg Ranch, there clearly needs to be some action taken with respect to health and safety. Pollution levels throughout the park units do not approach this level. Class I air quality in the remainder of the park units has less to do with health standards and more to do with park values (visibility, odor) for which no specific standards exist. The eventual decision will, through a finding, provide direction on the issue of derogation of park values, and an appropriate implementation period will be selected.
Page 15. Re: Citizens' Solution. The proposed "Citizens' Solution" is not significantly different from Alternative G as presented in the DEIS, especially considering the programmatic nature of the proposed action. See the matrix comparison of "The Citizens' Solution" versus the features analyzed in the range of alternatives. All alternatives in the DEIS meet the purpose and need for action to a greater or lesser degree.
Page 15. Re: NPS must mitigate or eliminate impacts to air quality from snowmobile use. Improved snowmachine technology and snowcoach, mass transit access are evaluated in the DEIS as possible alternatives to the current situation. Once again, the NPS solution will be articulated in a record of decision.
Page 16-17. Re: Effects of noise on wildlife. This issue will be reviewed and updated in the FEIS if necessary.
Page 17. Re: Approach to mitigating snowmobile noise. The analysis of sound will be updated in the FEIS.
Pages 17-18. Re: Policy requirements and data insufficiencies. The DEIS on page 126 and in Appendix C (Volume II) express policy requirements regarding natural quiet, as they relate to winter use issues.
Pages 18-19. Re: Failure to collect useful data on noise pollution in the parks. Additional data has been collected during the 1999-2000 winter season. Sound modeling has been conducted. Inadequacies pointed out in this comment are being addressed, and the analysis will be reflected in the FEIS.
Page 19. Re: The mode of access utilized by winter visitors must be the most quiet vehicle possible. This comment goes to the decision to be made. Commenter expresses how and why the decision ***must*** be made. This goes to the purpose and need for action and the decision to be made by NPS. The final strategy, or decision is based on selection criteria used by the decision maker, which are disclosed in the record of decision through discussion of "preferences among alternatives based on relevant factors and agency statutory missions" (§1505.2(b)).
Pages 19-23. Re: Impacts on water quality and aquatic resources. Impacts such as those detailed by commenter are summarized and cited in the DEIS, page 163 and subsequently for each alternative. An additional study not available for the DEIS has been completed and will be used in updating the analysis in the FEIS.
Page 23. Re: The use of snowmobiles and NPS mandates. The assertion that use of snowmobiles, because of perceived air and water impacts, violates the entire set of NPS mandates, executive orders and policies is a gross generalization. Such a finding has yet to be made relative to the three park units in question. Many places throughout this comment letter provide a restatement, or expansion, of literature summarized and cited in the EIS. The commenter extrapolates or generalizes from the literature to conclude that the activity in question conclusively demonstrates that the resources of the three park units are impaired beyond some legal limit. NPS maintains that the standard of impairment in most instances is a function of the criteria used by a decision-maker in the record of decision. The latter is a part of the decision to be made, based on relative effects between alternatives disclosed in the EIS.

Pages 23-26. Re: Impacts on water quality and aquatic resources. Impacts such as those detailed by commenter are summarized and cited in the DEIS, page 163 and subsequently for each alternative. An additional study not available for the DEIS has been completed and will be used in updating the analysis in the FEIS. Please see earlier response to this letter in regard to page 23 "Use of snowmobiles and NPS mandates."
Pages 27-30. Re: Impacts on wildlife. This comment is a restatement, or expansion, of literature summarized and cited in the EIS.
Page 30. Re: Regulatory requirements to protect wildlife. The commenter extrapolates or generalizes from the literature to conclude that the activity in question conclusively demonstrates that the resources of the three park units are impaired beyond some legal limit. NPS maintains that the standard of impairment in most instances is a function of the criteria used by a decision maker in the record of decision. The latter is a part of the decision to be made, based on relative effects between alternatives disclosed in the EIS and consideration of regulatory requirements.
Pages 30-32. Re: Impacts on wildlife. This comment is a restatement, or expansion, of literature summarized and cited in the EIS.
Page 33. Re: Impacts on individual animals and populations. These impacts are disclosed in the DEIS, pages 165-167, and subsequently for each alternative.
Page 33. Re: Winter road grooming impacts on bison and wildlife. These impacts are disclosed in the DEIS, pages 165-167, and subsequently for each alternative on pages 183, 209, 231, 250, 265, 281, and 291.
Page 34. Re: Recommendation for NPS to use road closures as an assessment tool. Assertion that " The Citizens' Solution" is an interim plan which is amendable pending thorough examination and mitigation of issues impacts. This suggestion appears to be no different than the adaptive management process incorporated directly into two of the DEIS alternatives – B and E. It is an approach that remains a choice for the decision maker.
Page 34. Re: User conflict. NPS points out that the issues regarding existing versus desired condition, the basis of the purpose and need for action, includes visitor experience (nonmotorized users and user conflicts). Analysis of visitor experience issues is presented in the DEIS, pages 149-154, 174 and subsequently for each alternative. NPS feels that this analysis is sufficient to ascertain the effects of various alternatives on the park visitor, as support for a programmatic plan. To a degree, effects are quantified in terms of visitor opportunities for each alternative. The commenter notably does not suggest a more specific means for quantifying impacts of snowmobile use on other park users.
Page 34. Re: Recent user surveys. Survey summaries regarding this kind of information may be found on pages 149-154 of the DEIS. Recently completed survey results will be reflected in this section of the FEIS.
Page 34. Re: NPS regulations and policies. The assertion that use of snowmobiles, because of perceived impacts on other users, violates NPS mandates and policies over generalizes the true situation. Such a finding has yet to be made relative to the three park units in question. NPS maintains that the standard of impairment in most instances is a function of the criteria used by a decision-maker in the record of decision. The latter is a part of the decision to be made, based on relative effects between alternatives disclosed in the EIS.
Page 35. Re: The park service must implement an alternative that ensures that access to the park does not detract from other visitors' experiences. This comment goes to the decision to be made. Commenter expresses how and why the decision ***must*** be made. This goes to the purpose and need for action and the decision to be made by NPS. The final strategy, or decision is based on selection criteria used by the decision maker, which are disclosed in the record of decision through discussion of "preferences among alternatives based on relevant factors and agency statutory missions" (§1505.2(b)).
Pages 35-44. Re: Legal and policy framework. Most of the discussion on these pages restates the information in the purpose and need section and Appendix C of the DEIS. The commenter uses this information to come to a conclusion that snowmobile use is, on its face, inconsistent with laws, executive orders and NPS policies. Commenter assumes on page 37 a level of documented adverse impacts that amounts to violation of law, etc. NPS maintains that such documentation is the purpose of an EIS: to analyze and disclose impacts of various alternatives, and to sharply define issues. NPS concludes that this comment is the rationale GYC would use in making a decision, as opposed to criticism on the adequacy of the EIS or the range of alternatives considered. Therefore, the comments on these pages go to the decision to be made, and requires no further response

Page 44. Re: Grand Teton and the CDST. No information is offered to exclude consideration of a separate CDST in Alternative B. This alternative feature is a possible alternative to the current situation which involves safety concerns, and it should be evaluated. Commenter appears to object because it is a feature in the preferred alternative. Should this feature be implemented, it is recognized that possible rule changes would be necessary, in addition to further NEPA and decision making on a site-specific level. These possibilities might discourage a decision maker, but they do not strictly prohibit the analysis of the option or its eventual selection.
Pages 44-45. Re: Cooperator process. The intent of granting cooperating agency status was in the spirit of cooperation and coordination consistent with NEPA, FACA and APA. The content of the document has been affected, but NPS disagrees that the analysis has been. The document incorporates material from the cooperating agencies, which is reported as a matter of full disclosure even though the results disagree with NPS analysis. Letters from the cooperators and the signed agreements between NPS and cooperators were included in the DEIS, Volume II. These items relate to content. As to inappropriate influence, one need only review media reports, comment letters or other correspondence from the cooperators to obtain their assessment of how they were involved. Regarding the commenters statement about NEPA provisions relating to cooperating agencies, NPS agrees.
Page 45. Re: Economics. The EIS presents a fair disclosure of impacts of winter use alternatives, including social and economic effects. Consideration of impacts and other factors is in the purview of the decision maker, who will select an alternative and provide rationale for that selection in a record of decision.
Page 47. Re: Public values and attitudes. The discussion of surveys in the DEIS is clear about the winter use survey methods, sampling, and participation. Survey results and conclusions have not been represented in any way that is inconsistent with this. Additional surveys have been completed and are available for incorporation into the FEIS analysis.

JACKSON HOLE CONSERVATION ALLIANCE

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Honorary Board

November 30, 1999

Clifford Hawkes
National Park Service
Denver Service Center
12795 West Alameda Parkway
Lakewood, CO 80228

On behalf of the Jackson Hole Conservation Alliance (JHCA) , thank you for the opportunity to provide comments regarding how best to address the burgeoning winter use in Grand Teton and Yellowstone National Parks and the John D. Rockefeller, Jr. Memorial Parkway.

JHCA is the largest membership organization in Teton County, Wyoming representing more than 1,800 members in every state in the country and a number of foreign countries, as well. We are an organization that is dedicated to responsible land stewardship to ensure that human activities are in harmony with the area's irreplaceable wildlife, scenic and other natural resources.

JHCA commends the National Park Service for their colossal undertaking of the Draft Environmental Impact Statement (DEIS), especially in the abbreviated time frame mandated by the courts. However, we do not agree with the Park Service's Preferred Alternative (Alternative B). We are confused at how the Park Service arrived at the particular components of Alternative B and why it thinks that these components will resolve the congestion, noise pollution, air pollution, human-induced bison migrations, user conflicts, etc. from which the Parks are currently suffering. In designing and recommending the Preferred Alternative, the Park Service has squandered what may be a once in a lifetime opportunity to make dramatic improvements to the winter experience in Yellowstone and Grand Teton National Parks.

We think there is a better solution – a better future for Grand Teton and Yellowstone National Parks. JHCA's preferred alternative acknowledges that in this part of the world, winter is the limiting factor for wildlife. Human presence during the harsh winter months has a greater impact on already stressed wildlife than it does during the summer months. JHCA's preferred alternative recognizes that the responsibility to protect wildlife rests with all of us -- cross-country skiers, snowmobilers, wildlife enthusiasts, visitors and residents. JHCA's preferred alternative will restore air quality and stillness, protect wildlife, and provide diverse, convenient, and affordable winter access to Yellowstone and Grand Teton National Parks. JHCA's preferred alternative also recognizes that in making changes to how and where people experience Yellowstone and Grand Teton in the winter, some may have to change the way they do business. But our recommendations will absolutely not ruin the economy. Our local businesses need to start taking advantage of opportunities to run their operations in a way that does not rely on a magnitude of winter use that our Parks simply cannot sustain.

The Jackson Hole Conservation Alliance urges Yellowstone and Grand Teton National Parks to adopt the following as The Preferred Alternative:

- Restore the natural winter character of Yellowstone by encouraging access by snow coaches instead of individual snowmobile trips. The growing use of the Parks for recreational snowmobiling must be curbed. Not only do snowmobiles damage our natural resources, this use requires ancillary facilities (*e.g.*, trucking, storing and providing gas for the entire winter) that drain Park budgets and result in their own resource damage (e.g., leaky tanks).
- Require any snowmobile used in Yellowstone and Grand Teton National Parks to comply with stringent noise and emission standards at least equal to limits imposed on automobiles. All snowmobiles not in compliance with those standards by the winter of 2002-3 will be banned from the Parks.
- Honor the Park Service's commitment, made back in 1990, to formally eliminate snowmobiling in the Potholes area of Grand Teton National Park. To wit:

  > *"[t]he Potholes snowmobile area will be closed to off-road travel as soon as possible pending revision of the special regulations. The current off-road snowmobile use of the 16,000-acre Potholes area is a major and unique exception to the NPS snowmobile policy adopted in 1978. The use predated the policy and was allowed to continue through a special regulation that was established about 10 years ago but will now be revised to be consistent with this plan (Grand Teton National Park Winter Use Plan, 1990, p. 45)."*

  Please also eliminate snowmobiling in the Jenny Lake area of Grand Teton National Park.
- Discontinue the Continental Divide Snowmobile Trail (CDST) in Grand Teton National Park. In addition to discouraging the more ecologically sound trend of public transportation in national parks, retaining the trail has a high maintenance cost that is unjustified by the number of users. In their July 1991 VUM Plan, GTNP officials promised: "If significant adverse effects are identified [in using the CDST through Grand Teton National Park], the option of shuttling snowmachines on trailers will be implemented immediately." We feel that such adverse effects have already been identified and that this promise should be kept. In the unfortunate event that the Parks should decide to retain the costly and intrusive CDST, under no circumstances should the CDST be moved to a new off-road alignment anywhere in the Park or the JD Rockefeller Memorial Parkway.
- Require a study to determine the winter carrying capacity in Yellowstone National Park so the National Park Service can strike a better balance between protection of Park resources and provide visitors with a quality park experience. Carrying capacity is defined as: "the maximum number of inhabitants that an environment can support without detrimental effects." This is a concept that is used regularly in setting wildlife management goals. In fact, the Parks have relied on the concept of carrying capacity as a reason to limit bison numbers in the Parks; a management action which they heretofore have not employed for any other wildlife species, including humans! It is detestable to us that the Parks would so freely set limits on the number of a particular species that can inhabit a National Park while resisting setting limits on the number of people that can use the same Park. We urge you to begin thinking about and employing limits, social and ecological, to the number of people that can use the National Parks in the winter.
- Limit or restrict off-trail and backcountry use by skiers and snowshoers in places where wildlife need additional protection in both Grand Teton and Yellowstone National Parks.
- Close Yellowstone's east entrance road where expensive avalanche control efforts involve military explosives that are not in keeping with the purpose of national parks.
- Encourage further research on the needs of wildlife wintering in Yellowstone and Grand Teton National Parks.

Winter recreation in the GYE is growing by leaps and bounds with oftentimes deleterious impacts on both the environment and the winter recreational experience. Visitors and residents alike are complaining about overcrowding, conflicts between user groups, safety, resource damage and trespassing as growing problems associated with winter activities. We need to restore balance to winter use of our National Parks. On any given day in the Park, a visitor should be able to enjoy the cleanest of air, the sound of wind in the trees, or a raven flapping overhead. If we can't demand a clean, quiet environment in a National Park, then where? And, by demanding strong measures to reduce noise and air pollution, we feel we will have gained not only in the National Parks but in the surrounding national forests and all areas used by over-snow vehicles.

Our National Parks were not established for private economic gain. If we cannot refrain from using them as dumping grounds for tons of hydrocarbons and tons of carbon monoxide, then we need to refrain from using them.

Sincerely,

Pamela Lichtman, Program Director
Jackson Hole Conservation Alliance
PO Box 2728
Jackson, WY 83001

JACKSON HOLE CONSERVATION ALLIANCE
Page 1. Re: Rationale for preferred alternative. NEPA (CEO Regulations) does not stipulate the rationale for selecting a preferred alternative in a DEIS. It stipulates that in a final EIS, a preferred alternative must be identified. The statement of preference for one or more alternatives in a draft EIS is discretionary, depending upon whether the agency has a preference at that point (§1502.14(e)). The identification of a preferred alternative in a DEIS should be regarded by the public as extremely tenuous. This is because an EIS is to serve as a means of assessing impacts of proposed agency actions "rather than justifying decisions already made" (§1502.2(g)). The FEIS preferred alternative may be viewed more as a "precursor" decision, which will only become final in a Record of Decision that expresses the rationale for the choice. In any case, it is clear that merely the expression of a preferred alternative, by itself, can in no way invalidate the entire EIS analysis. The decision-maker can select any of the proffered alternatives in a Final EIS through consideration of a variety of factors, including but not limited to environmental impacts. The selected alternative does not have to be the most environmentally preferable alternative, which must also be revealed in the decision document.
Page 1. Re: Analysis of alternative B. An analysis of how alternative B responds to the issues identified during scoping is provided in the DEIS on Pages 197-221. All alternatives in the DEIS meet the purpose and need for action to a greater or lesser degree. In our estimation, it is unrealistic to expect all alternatives in an EIS to meet all the desired conditions expressed in the purpose and need for action equally well. Such a set of alternatives would likely have no significant differences between them.
Page 2. Re: Encourage snowcoaches. Alternative G would limit travel in the parks to snowcoach only. Alternative B and alternative D both would require that if clean and quiet technologies are not available by 2008-2009 that oversnow travel would be limited to snowcoaches.
Page 2. Re: Stringent noise and emissions standards for snowmobiles. Each of the alternatives analyzed in the DEIS, with the exception of the no-action alternative, proposes some level of emission and sound standards which are more restrictive than those imposed today.
Page 2. Re: Close the Potholes area in Grand Teton NP. The Potholes area along with the Grand Teton park road, would be closed to motorized use in alternatives B, D, E, F, and G.
Page 2. Re: Discontinue the Continental Divide Snowmobile Trail. This proposal is a feature of alternatives G and E-F.
Page 2. Re: Require a study to determine visitor carrying capacity. This proposal is a feature of all alternatives considered.
Page 2. Re: Limit or restrict off trail and backcountry use. This is an alternative feature analyzed in the DEIS for Yellowstone National Park under alternatives B, D, F, and G. In Grand Teton National Park, backcountry use is prohibited in bighorn sheep winter range.
Page 2. Re: Close the East Entrance to Yellowstone National Park. This feature is proposed in alternative D.
Page 2. Re: Encourage further research on the needs of wintering wildlife. This is a feature of alternatives B, D, and F.
Page 3. Re: Effects associated with winter use in the parks. These issues mirror the issues and concern raised during scoping. Consequently they are topics analyzed in Chapter 4 of the DEIS.

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December 15, 1999

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Clifford Hawkes
National Park Service
12795 West Alameda Parkway
Lakewood, Colorado 80228

RE: Comments to Winter Use Plan Draft Environmental Impact Statement for the Yellowstone and Grand Teton National Parks and John D. Rockefeller Memorial Parkway

Dear Mr. Hawkes and Deciding Official:

We are submitting these comments to the Winter Use Plan Draft Environmental Impact Statement for the Yellowstone and Grand Teton National Parks and John D. Rockefeller Memorial Parkway (hereinafter referred to as "DEIS") on behalf of our clients Edward P. Dougherty; West Yellowstone Tour and Travel; Town of West Yellowstone, Montana; West Yellowstone Chamber of Commerce; Roy N. Brown; Montana Snowmobile Association; American Council of Snowmobile Associations; and the Blue Ribbon Coalition, Inc. Please note that any or all of these individuals, organizations or their members may submit additional comments, and any such comments shall supplement these comments and are hereby incorporated by reference herein.

The above-named individuals and organizations were granted defendant-intervenor status in the litigation which caused the creation of the DEIS, namely Fund for Animals v. Babbitt (D.D.C., Civ. No. 97-116) ("Babbitt"). The Court has retained jurisdiction over that case and we submitted numerous pleadings to the National Park Service (NPS) with our comments to the Temporary Closure of a Winter Road EA dated December 15, 1997. Those comments and materials submitted with it are also incorporated by reference in these comments as are any and all pleadings filed since that date in Babbitt.

These comments incorporate by reference the comments submitted by the cooperating agencies who participated in the DEIS including the states of Montana, Wyoming and Idaho; Gallatin and Park Counties, Montana; Park and Teton Counties, Wyoming; and Fremont County, Idaho. We will occasionally refer to the State of Wyoming's comments as "Wyoming Comments" and the State of Montana's comments as "Montana Comments" herein. Additionally, these comments incorporate by reference the comments submitted by John D. Mundinger of Consulting for Creative Solutions, LLC. Mr. Mundinger's comments are attached hereto as Exhibit "A" and will be hereinafter referred to as "Mundinger Comments."

We adopt the Revised Alternative E proposal crafted by the state of Wyoming and support the State of Montana's Proposed Preferred Alternative, and the Revised Alternative E proposed by the cooperating counties. Revised Alternative E better addresses the concerns raised by the Preferred Alternative B in the DEIS. The Preferred Alternative B is fatally flawed and is not backed by the cooperating agencies, interest groups nor the general public as was evident in the public hearings held by the NPS this fall.

A. PRELIMINARY STATEMENT

The release of the DEIS has resulted in significant efforts by many individuals, groups, local governmental agencies, three states and federal agencies. What is clear is that managing the Yellowstone and Grand Teton National Parks ("the Parks") is of great importance to the public - all of whom attach different yet strong beliefs on how their management is to be achieved.

The NPS has utilized the release of the DEIS to wage its own media blitz. Of particular concern are the numerous press releases, articles, television, radio and Internet accounts of NPS personnel misrepresenting the results of scientific studies as relates to emissions, bison impacts, air and water quality, noise and the type of experience a visitor is expected to desire in the Parks. NEPA and the APA requires the agency to take a "hard look" at the impacts of their proposed action. The NPS has so blatantly misrepresented facts to the public[1] that it is questionable whether the agency is capable of taking that "hard look" in the objective manner required. Even after the NPS admitted their gross exaggeration of the emissions impacts in the Parks, the NPS continued to advocate their indefensible position that snowmobiles degrade Park resources.

It is of notable importance that contrary to the NPS representations, the study relied on to monitor exposure for particulate matter has an incorrect conclusions. The results showed concentrations measured over four (4) hours not twenty-four (24) hours as required by the particulate matter (PM) equation. The correct concentration was nineteen (19), not one hundred twelve (112). The EPA standard is sixty-five (65). Accordingly, the NPS portrayal of the snowmobile emissions was inflammatory and not based on proper scientific evaluations. Further, gas does not go straight out of the tail pipe, vapor and molecularized carbon leaves all tailpipes. The NPS press release grossly over estimates the PAH at 453 grams when it is actually .000543 pounds. The NPS exaggerated the effects of ethanol use they stated it is known to cause developmental and neurotoxic problems in humans. Ethanol only has these effects when ingested! The report relied upon by the NPS stated in part that "[o]n a peak day, when 2000 snowmobiles enter the Park, 32 tons of hydrocarbons and 88 tons of carbon monoxide can be emitted." This oft quoted statement is impossible as described as follows:

32 tons + 88 tons = 120 tons
120 tons = 240,000 lbs.
1 gallon of gasoline = 6.2 lbs.
240,000 lbs. = 38,710 gallons of gasoline
Average snowmobile gas consumption/day = 7 gallons

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[1] See, for instance Yellowstone National Park press release dated October 9, 1999.

2000 snowmobiles x 7 gallons = 14,000 gallons of gas
14,000 gallons x 6.2 lbs. = 86,800 lbs. or 43.4 tons

Obviously, it is mathematically impossible to generate 120 tons of emissions on a peak day when only 43.4 tons of gasoline is consumed. Such blatant mistakes in calculations on part of a governmental entity is inexcusable and should not be used to base a discussion to plow the road to curtail snowmobile access.

Our clients do not seek to degrade the Parks as is evident in their support of Revised Alternative E. They wish, however, to receive reasonable decision making by the NPS based on facts, not rhetoric nor because a special interest group threatens to sue. The people that use the Parks, their local and state governments that are familiar with the natural resources, culture, recreation and economy have significant expertise in evaluating the Winter Use of the Parks have gone to great lengths to provide the NPS with meaningful comments and reasonable suggestions. Alternative B must be rejected and revised Alternative E selected as Revised Alternative E protects and enhances the states in which the Park lies, their local governments, their citizens and the visiting public.

The NPS media blitz aimed to turn public opinion against snowmobiling using blatantly flawed information violates the APA, NEPA as well as other federal statutes and regulations. The DEIS is subject to public comments and the NPS's attempt to misuse media coverage to meet its own end seriously compromises the whole process.

B. PROCEDURAL HISTORY AND CONCERNS WITH THE DEIS PROCESS

1. Fund for Animals v. Babbitt.

As described earlier, our clients were granted full defendant-intervenor status in the Babbitt case whose Settlement Agreement between the Fund for Animals ("Fund") and the National Park Service ("NPS") created the need and time frames for the DEIS. The Fund and the Greater Yellowstone Coalition requested the NPS to extend the comment period on the DEIS "to allow more time for people to comment" according to a November 20, 1999 article in the Casper newspaper. It is ironic that now the Fund believes the time frame for public comment is unreasonable since in its October 10, 1997 Plaintiffs' Response to Comments of Proposed Intervenors Yellowstone Outdoor Recreation Solutions, et al., and To The Comments, Objections and Legal Memorandum of Proposed Intervenors Edward Dougherty, they, informed the Court that "[t]he [settlement] Agreement sets forth a realistic timetable for preparation of this EIS, and provides for 'at least' 60 days of public comment. Thus, the Agreement does not unduly restrict public comment."

The defendants-intervenors in Babbitt strenuously argued the time frames for the preparation and public comment on the EIS were unreasonably short and would negatively affect the quality of the EIS for that reason. As stated in the Comments and Objections of Intervenor-Applicants Edward P. Dougherty, et al. Regarding Proposed Settlement Agreement and Motion To Approve Settlement and to Dismiss Action, "[t]he restricted proposed time frames for decision will likely lead to a less than thorough analysis of public comments and decision-making process [in the EIS]." [2] Our concerns with the Settlement Agreement filed with the Babbitt court on October 6, 1997, are being borne out today and admitted by the Fund and who caused this NEPA process to commence. As of November 30, 1999, in an eleventh-hour decision, the NPS extended the DEIS comment period for the following reasons:

> After the NPS re-evaluated the numerous requests they had received for an extension and decided that an extended review was appropriate in recognition of the complexity of the proposals, the degree of public interest in the draft plan, and the desire of the NPS for thoughtful public input based on a thorough review of the draft plan.
>
> The winter use planning process is the result of a May 1997 lawsuit filed by several conservation and animal rights organizations and individuals. If the lawsuit had been fought unsuccessfully, all winter use of the parks could have been halted until an Environmental

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[2] These pleadings were provided in our comments submitted to the Temporary Road Closure EA, are public record in the Babbitt proceeding over which the Court currently maintains jurisdiction, and are in the possession of legal counsel to the NPS and do not require resubmission with these comments but are incorporated by reference herein as if they were.

Impact Statement (EIS) was completed. The National Park Service opted instead to pursue a settlement agreement with the plaintiffs, which allowed *activities to continue under the existing winter use* plan while the EIS was prepared according to a prescribed schedule.

When the Draft Winter Use Plan and EIS was released in August, the NPS explained that requests for any additional extensions of the public comment period could not be granted because of a September 1, 2000 deadline for completion of the final plan contained in the settlement agreement. Plaintiffs in the lawsuit have agreed to extend the completion deadline to October 1, 2000 in order to accommodate further public comments.

The NPS still needs to extend the October 1, 2000 final EIS date in order to properly consider the thousands of comments received on the DEIS as required by NEPA and the CEQ regulations 40 CFR 1503.4. The Fund would be hard-pressed to object to such a request since they asked for, and received an extension of the public comment period even after over 11,000 comments on the DEIS had already been received prior to November 30, 1999.

The NPS press release also trivializes the Babbitt litigation which lead to this process. The press release leads the public to believe that had the NPS not settled the case with the Plaintiffs and paid them $11,000 in Equal Access to Justice Act fees, the whole Park would have been "shut down." Nothing was further from the truth. The Fund would have been forced to prove irreparable harm from winter use. The underlying premise of the Fund's case was that bison should be trapped in the Park to starve to avoid a report of the 1996 extermination of bison leaving the Park to avoid the spread of brucellosis.

NEPA compliance is required by any contemplated "shut down." Even the Settlement Agreement acknowledges that fact, as did Plaintiffs' attorneys in open court. Further, our clients motion to intervene was originally denied only after the court granted us the opportunity to comment on the Settlement Agreement which was amended to require notice of any changes to intervenors. Over the temporary road closure EA was completed and no roads were closed as a result. The Fund filed another suit which was dismissed and we were then granted full defendant-intervenor status in the present case.

The NPS press release is clearly self-serving and shows its bias toward the Fund and the Bluewater Network whose stated goal is to eliminate snowmobiling in national parks regardless of whether any actual impact or harm exists to bison, or the Parks other resources.

Since the Court retained jurisdiction over Babbitt, the NPS should seek leave of the court to amend the Settlement Agreement to extend the Final EIS completion date to address the time frame concerns raised by the Fund, GYA and NPS staff. To continue to rush the analysis of this project violates the mandate of NEPA to produce a well-reasoned analysis of the impacts posed by a winter use plan.

2. Release of the DEIS Over the Internet was Insufficient to Comply with NEPA and CEQ Public Comment Processes.

Both NEPA and the CEQ regulations require meaningful public comment to major federal actions. The DEIS preferred alternative is a major federal action. It is required to use a format "which will encourage good analysis and clear presentation of the alternatives including the proposed action." 40 CFR 1502.10. The NPS made the DEIS available on the Internet around August 1, 1999. The hard copies of the DEIS were not received by persons so requesting copies until September 28, 1999. The DEIS exceeds 700 pages of text, maps, exhibits, letters, charts and other documents. Most personal computers do not have the capacity or sophistication to download such a large document. The Internet document did not provide uniform pagination sufficient for the public to easily work with the document even if they were able to download it. We believe, therefore, that the release of the DEIS on the Internet failed to meet the CEQ requirement of making the DEIS available for public comment.

3. The DEIS Fails to Comply With the Small Business Regulatory Enforcement Fairness Act ("SBREFA").

The Small Business Regulatory Fairness Act ("SBREFA"), 5 U.S.C. sections 801 et seq., requires federal agencies to submit a report of proposed rules to each House of Congress and the Comptroller-General before it may become effective. A major rule may not become effective until 60 days after it is submitted to Congress or published in the Federal Register, whichever is later. This requirement is designed to keep Congress informed about rulemaking activities of federal agencies and to allow for congressional review of rules.

This is broader than rules subject to Administrative Procedure Act ("APA") rulemaking procedures. Agency actions required to be published by 5 U.S.C. section 552(a) but exempt from section 553 rulemaking procedures are required to be submitted under SBREFA. For each such decision, the agency must also submit the following: (1) a report containing a concise general statement relating to the rule and its proposed effective date; (2) a complete copy of any cost/benefit analysis; (3)information concerning the agency's actions under the Regulatory Flexibility Act and the Unfunded Mandates Reform Act; and (4) any other relevant information or requirements under any other law or Executive Order.

As a federal agency within the Department of the Interior, the National Park Service is bound by SBREFA. The Winter Use Plan constitutes a rulemaking subject to SBREFA as such actions were described in an opinion issued by the Comptroller-General on July 3, 1997, opinion B-275178. If the Winter Use Plan is not properly submitted according to SBREFA all action taken by the NPS pursuant to it is invalid. This further necessitates amending the October 1, 2000 final EIS date.

4. The Cumulative Impacts for Plowing the Road from West Yellowstone, Montana to Old Faithful are Not Adequately Addressed in the DEIS.

The NPS has a duty to provide sufficient actual data and analysis to support plowing the road from West Yellowstone to Old Faithful, eliminating the Grand Loop experience to oversnow use, establishing emission standards in excess of state air quality and EPA guidelines and reducing noise decibels to arbitrary levels. The DEIS and Alternative B in particular violates the CEQ regulations in this regard. When applying NAPA, agencies must:

> utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment....

The Wyoming, Montana and Mundinger Comments better analyze these impacts which must be addressed in the DEIS.

42 U.S.C. § 4332(A); 40 C.F.R. § 1502.6. NEPA does not envision undocumented narrative exposition, instead requiring:

> Agencies shall insure the professional integrity, including the scientific integrity, of the discussions and analyses in environmental impact statements. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement. An agency may place discussion of methodology in an appendix.

40 C.F.R. § 1502.24. Specialized expertise often lies at the core of NEPA analysis, but the agency cannot cloak application of such expertise behind a veil of secrecy. Identification of experts, methods, research assumptions, reference sources, and other documentation must be identified to allow a reviewing court to apply even the deferential arbitrary and capricious standard of review to technical analysis. For instance, the "natural quiet" values proposed by the DEIS are not supported by data, methodolgy, sources or expert reports.

Hard data must be presented in the NEPA document itself, or at least must be specifically referenced in the NEPA document and presented in the administrative record. Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1213-1214 (9th Cir. 1998). The DEIS fails in this regard. The Montana, Wyoming ND Mundinger Comments point out the flawed and/or missing data which cannot be ignored by the NPS when evaluating Alternative B.

C. REVISED ALTERNATIVE E SHOULD BE ADOPTED IN THE FINAL EIS.

1. Revised Alternative E.

As proposed by Preferred Alternative B, plowing the road from West Yellowstone, Montana, to Old Faithful without allowing snowmobile travel over the route is environmentally unsound as it negatively affects bison and other wildlife, breaches existing concessionaire agreements for snowmobile tours, and eliminates a preferred mode of transportation for the public to enjoy the Yellowstone National Park, will likely fail to increase visitor numbers as estimated, and creates an economic windfall to the NPS at the expense of the gateway communities. See, Revised Alternative E, attached and incorporated by reference to these comments.

As better described in the Wyoming Comments beginning at page 20 of 49, "[r]evised Alternative E emphasizes the protection of wildlife and other natural resources while allowing park access to a *full* range of written recreation experiences."

a. Actions Common to Yellowstone, Grand Teton and the Parkway.

1. Mitigates impacts pursuant to 36 CFR 2.18.
2. Encourages public/private partnership addressing visitor, natural resource management, emissions and sound concerns by establishing a FACA compliant advisory committee.
3. Requires the sale and use of bio-base fuels in the Parks beginning 2001-02 season. All commercial operators would be required to use the bio-based fuel.
4. Established a reasonable interim visitor carrying capacity based on use patterns related to a seven-year average. Adaptive planning would be used to address long-term carrying capacities for both visitors and wildlife.

5. Establish a nighttime closure to enter Yellowstone National Park, Grand Teton National Park and the Parkway to promote safety, improve trail maintenance and protect wildlife.
6. Implement aggressive safety and etiquette programs in conjunction with all user groups.
7. Strictly enforce the posted speed limit with a maximum speed of 45 mph.
8. Impose a 35 mph nighttime speed limit from sunrise to sunset during times the Parks are open to oversnow travel.
9. Better disbursement of winter uses throughout the Parks to eliminate concentrated users by utilizing existing visitor facilities for overnight lodging, food service, and warming huts. Additional warming huts are needed at areas that do not presently exist to enhance the visitor disbursement.
10. Develop and circulate an educational video for use in gateway communities and in the Park to inform snowmobile and other winter equipment renters of safety, laws, etiquette and park resource management concerns.

b. Actions for Yellowstone National Park.

1. Continue scientific studies and monitoring related to park resources and winter use utilizing objective third-party peer review. If such studies substantiate human use detrimentally effects park resources to such a degree as curtailment is necessary, conduct appropriate NEPA review with a minimum public comment period of 120 days and a one year notice of implementation before any closure takes place.
2. Prohibit plowing roads during the winter visitor season except for the Gardiner, Mammoth, Tower-Roosevelt and Cooke City areas.
3. Expand non-motorized opportunities/trails away from motorized routes to avoid user conflicts.
4. Restrict non-motorized uses to trails only to wildlife winter range areas.
5. Relocate snowmobile parking at Old Faithful away from the Visitor Center and Old Faithful Lodge to address congestion and visual

concerns. Reserve parking in the immediate Visitors Center area for snowcoaches and ADA access for snowmobiles.

6. Require west entrances gate passes be pre-purchased at local outlets or at the public lands Information Center in West Yellowstone. Promote such pre-purchases at other entrances.

c. Actions for Grand Teton National Park and the Parkway.

1. Provide a route for the Continental Divide Snowmobile Trail on a year-round, off-road path from the east entrance of the Grand Teton National Park to Moran to Flagg Ranch while taking advantage of suitable resource conditions, to _____ and grade to accommodate both winter grooming and summer hiking/bicycle use. Commercial outfitting use of such a new trail would be allowed. The existing utility corridor could be utilized for this purpose.
2. Improve trail grooming along the Grass Lake Road in cooperation with the State of Wyoming and Fremont County, Idaho. Allow commercial outfitting use.
3. Continue motorized use by snowmobiles and snow planes on the frozen surface of Jackson Lake.
4. Provide expanded non-motorized opportunities away from motorized routes within the interior of the Grand Teton National Park along Teton Park Road and the Moose-Wilson Road. Enhance non-motorized opportunities in the Flagg Ranch area.
5. Continue destination and support facilities at Moose, Triangle-X, Colter Bay and Flagg Ranch. Add warming huts to expand visitor services and disperse visitor use.

2. Adaptive Management and the Federal Advisory Committee Act.

Revised Alternative E supports the adaptive management concepts raised in the DEIS. Such an adaptive management approach must continue scientific study and monitoring of all winter uses and their relative impacts on park resources utilizing mitigation efforts before closing roads or areas to winter use. The DEIS does not adequately describe how its adaptive management would be structured to comply with the Federal Advisory Committee Act ("FACA"), 5 U.S.C. App. II section 1 et seq.

FACA provides for public notice of, public participation in, and public access to the documents of a committee formed to advise the federal government. There are three elements to FACA's definition of an advisory committee: (1) FACA applies only to a group containing at least one (1) person not employed by the government; (2) the group subject to FACA must be established either by statute, utilized by the President or an agency; and (3) the group must be established or utilized for the purpose of supplying advice or recommendations to the President or and agency.

Of concern is the remedy for violating FACA, injunctive relief in the form of prohibiting the use of the advisory committee report where the committee process did not comply with its requirements. Alabama-Tombigbee Rivers Coalition v. DOI, 26 F.3d 1103 (11th Cir. 1994). Such a result could severely impact the adaptive management portion of the DEIS and Revised Alternative E. It is in everyone's best interest that the adaptive management portion of the Winter Use Plan strictly comply with FACA so the committee work is not wasted and can be utilized.

3. Alternative B Cannot be Chosen for the Final EIS

a. Plowing the Road from West Yellowstone, Montana to Old Faithful is Not Supported by the DEIS

As demonstrated by the Mundinger Comments, the DEIS fails to reconcile the DEIS for the Interagency Bison Management Plan ("Bison DEIS"). First, the DEIS and the Bison DEIS use different methodology for analyzing impacts to bison. Prior to 1967, the average number of bison removed from Yellowstone was greater even though the herd was smaller than in recent years, including 1996.

Alternative B completely omits analysis of the tunnel effect on ungulates that would be created by a tall berm. See Mundinger Comments. Further, Alternative B is completely devoid of analysis of plowing on bison migration. The Settlement Agreement provided that monitoring was to be done on bison.

The report from Robert Carroll and Daniel Bjornlie from September 30, 1998 indicates the following:

> PROGRESS: 9/30/1998
> Data were collected from November 1997 through May 1998 on the effects of road grooming on bison in the Madison-Firehole-Gibbon area of Yellowstone NP. Roads in the study area surveyed to determine diurnal and nocturnal road use by bison. No relationship was found between bison use of roads and snow depth. The number of bison groups observed traveling on roads increased in late December and then leveled off until late March when it increased sharply. This increase coincided with the end of road grooming and the beginning of road plowing for wheeled vehicles, as well as snow meltoff and vegetation greenup at lower elevations. Behavioral observations of traveling groups of bison reveal that interactions between bison and park visitors induced a negative reaction from bison in 21 of 28 interactions. Only 8 percent of bison travel took place on the groomed roads during the road grooming period. Most travel (62 percent) took place off of roads and established trail…appeared to use waterways as off-road travel corridors. Bison displayed behavior to minimize the energetic cost of traveling through snow. Bison groups were observed traveling single file in 91 of 125 instances.

This information was presented to NPS but not provided to the public as were other study results in the NPS news releases. The National Academy of Sciences determined that snowmobile trail grooming had no appreciable effect on the movement or health of bison in Yellowstone. Cheville, N.F., McCullough, D.R. & Paulson, L.R. 1997, Brucellosis in the greater Yellowstone Area, National Academy Press. Part II of that research specifically addresses the influences of grooming winter roads upon bison movement, and refutes the hypothesis that trail grooming has contributed to increases in bison population. Following an extensive review of the literature (including Meagher and Aune research) and independent research, the authors provide a substantial body of evidence refuting the premise for plowing the road. According to their findings, the authors conclude that bison travel cross-country as often as they use groomed roads, that population growth has been constant before and after groomed roads were available and used by bison, and that mortality is controlled by factors other than grooming. In short, "[t]here seems to be little supporting evidence of an ultimate effect of road grooming on bison population dynamics." Id. At Part II, p. 24.

It is disturbing that the DEIS purposely omitted analysis of wildlife carrying capacities because "it is a complex effort outside the scope of this study and the decision to be made." DEIS Chapter 1. The Babbitt lawsuit by the Fund for Animals, which was the direct cause of this DEIS and its Settlement Agreement addressed, the need to monitor effects of winter use on wildlife populations. This certainly includes carrying capacity. See also Mundinger Comments, p. 2.

Alternatives B and E emphasize an adaptive management approach to park resource management. The DEIS fails to identify the nature of new and ongoing research, monitoring methods, standards to be used to determine disturbance to wildlife and contingency strategies. The Bison EIS contains some of this information but was not even acknowledged in the present DEIS. Also, no guidelines are established to determine when the Bison Plan and Winter Use Plan conflict with regard to bison management, which would take precedence. This is a cumulative effect that was not adequately addressed in the DEIS and is required under NEPA. See also Mundinger Comments, p. 4-9. The DEIS fails to analyze the tunnel effect on ungulates from the road plowing. Mundinger Comments, p. 7, No. 30.

b. Natural Quiet Requirements are Unsubstantiated

In addition to the lack of supporting data addressing the impacts to wildlife and bison, the DEIS's emphasis on "Natural Quiet" is unjustified. See Mundinger Comments, p. 7, No. 32. Snowmobiles and snowcoaches travel on long-established roads. The DEIS makes one believe you could travel by snowmobile anywhere in the Parks thus making the entrance area noisy. Nothing is further from the truth. It is seldom that anyone skis or snowshoes from an entrance to the Parks interior. Snowcoaches and snowmobiles provide access for these non-motorized activities. It is ridiculous to desire natural quiet nest to an established road. The methodology of studying social recreational values is available but not disclosed by the DEIS. In otherwords, the DEIS desires natural quiet but fails to justify its existence in areas of access to all visitors.

Revised Alternative E's desire for enhancing non-motorized travel corridors is a logical, reasonable way to address this concern. Closing what is a state highway to achieve natural quiet is unsubstantiated and too drastic.

4. Strict Adherence to Applicable Water and Solid Waste Quality Standards

Any pollution that harms the natural resources of the two parks is of concern to the Cooperating Counties. However, the magnitude of risk has to be put into perspective and treated proportionally as to the threat it poses.

The DEIS (and other Park documents) focuses on the unquantified effects posed by snowmachine emissions. It states, "Discussion of impacts of alternatives on snowmobile emissions exposure focuses on the likelihood that employees, visitors and snowmobile operators and riders will be exposed to air pollutant emissions that violate NAAQA and state air quality standards for Idaho, Montana, and Wyoming." (emphasis added) DEIS at 161.

There is no basis to establish that "likelihood." If it is real, then deference should be given to the appropriate state agencies to measure the air quality and to determine whether there has been any degradation. There is no indication that the states have failed their responsibilities and the jurisdiction for this relationship is reinforced in NPS Regulations that state:

> Except as otherwise provided in this section, the laws of the State in which the exterior boundaries of a park area or a portion thereof is located shall govern equipment standards and the operation of snowmobiles. Non-conflicting state laws are adopted as a part of these regulations. 36 CFR Sec. 2.18 (b).

Sound scientific analysis is lacking throughout the DEIS. It repeatedly rests on assumptions as it attempts to establish a "likelihood" of air quality degradation, a key component of the document. For example, the DEIS states, "Generally, it is assumed that when snowmachine use increases, the risk or potential for general water quality and aquatic resource impacts increases as well." Id. At 163 (emphasis added)

Another NPD document is even stronger in describing the profound lack of sound, scientific information on another interrelated issue. According to the *Environmental Assessment* (at 29), "Impacts to the aquatic resources (fish, amphibians, waterfowl, and vegetation) and the predators that use these resources (bears, wolves, eagles, otters, and mink) due to snowpack runoff containing potential snowmachine pollutants are *unknown*." (emphasis added)

These unknown amounts should be weighed against what is known and quantified -- the degree of water degradation that currently exists. The absolute standard for water quality is set out in YNP's own document: "[W]aters in Yellowstone National Park are designated Class I by the State of Wyoming; therefore, no wastewater discharges are allowed in these park waters." [cite]

But there have been sewage discharges in YNP. Its Superintendent, Mike Finley, wrote Wyoming's Department of Environmental Quality detailing a series of recent accidents. The December 3, 1998 letter from Supervisor Finley to Wyoming Department of Environmental Quality is attached and incorporated by reference in these comments. These actual spills pose a bigger, more concrete threat to both the aquatic and land resources of Yellowstone Park than those assumed by the NPS for snowmachine emissions.

Below is a summary of four of those sewage spills according to Mr. Finley:

- On June 2, 1998, "Approximately 67,000 gallons of partially treated sewage then discharged from the septic tank into the infiltration ditch. This infiltration ditch had a previously undetected breach in it some 225 feet from the septic tank and the partially treated sewage went out this breach, across approximately 50 feet of vegetation and into a backwater of Yellowstone Lake."

- On June 27, 1998, 70,000 gallons overflowed with much of it again escaping through a breach and being released "through the vegetation and into the backwater of Yellowstone Lake."

- On September 14, 1998, "The flow ran across the ground and discharged into Myriad Creek, a tributary to the Firehole River. Approximately 1,000 gallons overflowed the manhole and most of it reached the creek."

- Three weeks later on October 6-7 a spill downstream from the first resulted in another 45,000 gallons overflowing the system, "approximately 15,000 gallons of partially treated sewage was discharged from the septic tank."

YNP officials received a Notice of Violation (N.O.V), Docket Number 3013-98 from the Wyoming Department of Environmental Quality for these four sewage spills. Yet, in Mr. Finley's letter to Wyoming DEQ, there is no indication that NPS conducted any cleanup of either the land or water for these 114,000 gallons of sewage. As a result of this non-compliance, the Park faced sanctions, including fines.

The DEIS discusses the threat of degradation of streams as a result of snowmachine emissions. If this is truly a concern, then it is difficult to understand why Yellowstone officials have cut back on efforts to measure and evaluate the Park's streams. Its own Strategic Plan lays out the direction for this key issue, "Yellowstone no longer contributes funds to stream gauge monitoring programs due to funding shortages." The Plan further states that, "Ground water monitoring has been abandoned." We recommend an explanation that reconciles these actions since they seem to be at odds with the concerns referenced in the DEIS.

In addition, the DEIS' focus on *de minims* water pollution levels, allegedly exacerbated by snowmachines, ignores the larger picture or the cause – the antiquated systems that regularly dump large amounts of raw sewage into Yellowstone Lake and other pristine waters.

YNP Superintendent Mike Finely has detailed these in his letter to the Wyoming Department of Environmental Quality. In his December 3, 1998 letter Mr. Finley states that "[m]uch of the water and sewage collection and distribution systems are leaking and the treatment facilities are in various states of deterioration ... One system has totally failed and resource damage is occurring in at least three others. The smaller septic tank systems are not being maintained properly and will eventually fail."

5. Snowmobile Emissions

Not only does the DEIS fail to adequately substantiate its strict emissions standards necessary by 2008-2009 in Alternative B, the NPS issued a press release grossly misstating air quality in Yellowstone in a blatant attempt to gain public support of oversnow use closures. In fact, the National Ambient Air Quality Standards were not exceeded at the West Yellowstone, Montana entrance to the Park as reported. The National Ambient Air Quality Standard for acceptable particulate matter is 65, not 60 as stated by the NPS. The particulate figures reported by the NPD were based on a four-hour exposure sample instead of the 24 hour standard. The NPS also mislead the public by grossly exaggerating the amount of poly-cyclicoromatic hydrocarbons ("PAHs") in pounds instead of micrograms. The actual amount PAHs emitted is approximately .000543 pounds. This is a huge error and clearly demonstrates the NPS apparent purposeful misrepresentation of the actual park air quality. Given the NPS gross misunderstanding of emission quantifications, it is arbitrary for the NPS not to follow the EPA guidelines on snowmobile emissions scheduled for release in just a few months. EPA standards should be adopted by the final EIS.

We have received information regarding emissions from Montana Department of Environmental Quality (DEQ). We also incorporate their comments to the DEIS by reference. It is our understanding that the Montana DEQ, in cooperation with NPS at Yellowstone, the Department of Energy, and many others have conducted or coordinated applied research activities related to snowmobiles and their impacts. These studies were to document problems and explore solutions to help land managers make informed decisions regarding snowmobile use on their lands. The work was undertaken with the expectation that it would be used in Yellowstone and other locations where snowmobiles are used.

Basing decisions for all the units of NPS on that small area by the West Entranc
questionable. Montana DEQ states that there is a significant difference between ambi
air standards and the NPS occupational exposure data collected in many NPS studies. The National Ambient Air Quality Standards (NAAQS) are set to protect the general population, and include a specific monitoring method and time period. Montana has adopted their own set of ambient air quality standards called the Montana Ambient Air Quality Standards (MAAQS). Apparently, two other states also have set standards oth
than the national standards. Occupational exposure data is not comparable to these standards unless the standard's data collection and analyses methods are used. See Montana DEQ Comments.

According to Montana DEQ, "personal exposure standards are designed to protect workers from exposure to pollutants over the course of a workday. There are three sets of current personal exposure standards, but only those of the Occupational Safety and Health Administration (OSHA) listed as personal exposure level (PEL) are enforceable. Other non-enforceable standards used for comparison in the references. These includes the National Institute of Safety and Health (NIOSH), OSHA's research arm. NIOSH reports their standards as recommended exposure levels (REL). The American Conference of Governmental Industrial Hygienists (ACGIH) is another recognized organization that reports standards as threshold limit values (TLV). For comparison, the OSHA PEL is 50 PPM CO, NIOSH REL is 35 PPM, and the ACGIH TLV is 25 PPM." See Montana DEQ Comments.

"In considering emissions, the Montana DEQ felt the NPS report confused the limits imposed to protect employees in the workplace (50 PPM) with the ambient air quality standards. Ambient air quality standards specify a method to collect data and a limit. The NPS report incorrectly states that MAAQS have been exceeded by snowmobiles in Yellowstone. If MAAQS or NAAQS had been exceeded, it would ha
triggered a process to correct the situation. Information on this process should be in th
NPS report, not just for Montana but the other NPS units of concern." See Montana D
Comments.

"Page 1, Paragraph 1, Sentence 4: Numbers of visitors and snowmobiles from West Yellowstone to Old Faithful is higher than the (61,568) number reflected in the Yellowstone...Winter Use Draft Environmental Impact Statement

(DEIS). Further, the way the sentence is constructed implies that all the people ride on snowmobiles, when in fact only 55,319 ride them (DEIS), and about 23-25 percent of the riders ride double or are towed. The sentence needs to be broken up to describe the total for the Park and West Entrance separately." See Montana DEQ Comments. See Montana DEQ Comments.

"Page 1, Paragraph 1, last sentence: The NPS report states that it is to provide information to enable the National Park Service to make an informed decision regarding use of snowmobiles in units of the NPS system. The sentence also should explain the differences between legal limits for "air quality" and "personal exposure levels." "All references to water quality should be placed separately since this paragraph focuses on air quality."

"[M]ost importantly, the DEIS fails to identify the largest variable in the air quality equation—climate at specific locations. Kado's 1999 draft final report illustrates that the West Entrance is the hot spot for Yellowstone's carbon monoxide and particulate matter sampling because of the high levels reported there compared to other sites. For another example, one street corner at a location near Yellowstone National Park has 250 times its annual average number of vehicles pass the intersection in the summer season without any deterioration in air quality. However, that same corner in the winter will have one-eighth (1/8) of its annual average annual vehicle count approach the National Ambient Air Quality Standards for carbon monoxide. The difference is the weather and dispersion of emissions." See Montana DEQ Comments.

"Page 1, second paragraph, last sentence: The sentence is not a complete comparison, and inaccurately paraphrases a conclusion in the White and Carroll report of 1998. ("Toxic hydrocarbon species are present in snowmobile exhaust in proportions similar to those observed from other sources such as passenger cars fueled with gasoline."" Page 48, paragraph 2, Carroll et al. 1998." See Montana DEQ Comments.

"Page 1, last line "variability in these factors due primarily to…" We recommend you change the order from most impact to least. The primary differences (in descending order) are the test procedure used on the engines, second, the fuel, and third, the engine lubrication oil. However, the most important factor relative to particulate matter is the lubrication oil (White and Carroll, 1998). An SAE paper presented in September 1998 and May 1999 detailing the ISO snowmobile procedure (used at SwRI) with a comparison to other engine test protocols (EPA, MMA, SAE J-1088)" is more accurate and should be reviewed in the DEIS." Over $250,000 went into development of this procedure. "The real difference in emissions is how the engine is used in the field. The only procedure that is based on field data is the ISMA-approved ISO 5-mode steady-state procedure used by SwRI. This was developed by the same team that developed the EPA approved SAE J-1088 protocol for small engines in cooperation with the snowmobile industry and air quality control agencies, and in part, for use in the NPS-DOE-DEQ studies."

"Page 2, Table 1, Snowmobile emission factors: It is inappropriate to average all these emission factors due to the differences in test procedures and availability of products. For example, line item 8 lists SwRI 1998 Polaris emissions using aliphatic gasoline. This fuel is a specialty chemical in the United States costing about $3.50 to $4.00 per gallon (before taxes). The fuel type was added by SwRI in cooperation with some European countries. Aliphatic gasoline has no oxygenates, olefins, and virtually no sulfur or aromatics. Its purpose is to reduce carcinogenic exposures of operators (such as in the German forest products industry). The fuel is not suited to use in these two-stroke engines, and was found to increase ALL emissions but carcinogenic compounds. It would never be used in sleds in this country, and as a result of this testing, will not be used in Sweden or Germany either." See Montana DEQ Comments.

Page 2, Table 1, item 5: The table lists emission factors "Polaris 98 Rich" but does not explain this test's importance to managers. NPS should provide this explanation for their management. The "Rich" test shows that snowmobiles need to be properly set-up and jetted for the elevation and climate where they will be operated. The "Rich" test was conducted to simulate emissions and performance of a snowmobile that is jetted for a lower elevation, like Minnesota, but used in Yellowstone without re-jetting—a situation that does occur regularly in Yellowstone. The "Rich" test generated significantly higher HC, CO and PM emissions (20, 14, and 28 percent respectively) compared to the baseline emissions. Fuel consumption was increased by 13 percent, and power was decreased by 14 percent. (page 12, paragraph 2, White and Carroll 1998)." See Montana DEQ Comments.

"Page 2, Paragraph 2, Sentence 2 "...by a factor of 2 lower...." The final report identifies CO was 40 percent lower. The temperature difference accounts for a major share of the difference. However, another factor in the lower CO number is that the SwRI emissions number is for the complete range of snowmobile use—five different driving styles and five different modes (incorporating variations in engine speed and torque). The emissions recorded by Bishop and Stedman were produced under a single operating style (touring, or moderate) mode, and engine speed and torque (10-15 mph). The similar HC concentrations indicate that these engines emit unburned fuel and lube oil at about the same proportion at any speed—a finding also confirmed in the laboratory tests." See Montana DEQ Comments.

"Page 3, first paragraph, last sentence: "...mean toluene concentration of...." This is a good finding. However, the report lacks an explanation of its significance for NPS managers. For example, the report can explain that the concentration of toluene in the exhaust vapor is similar to its concentration in gasoline (Morris, Bishop, Stedman 1999). Also, the concentration can be referenced to several occupational exposure standards.
Page 3, second paragraph, first sentence, "Snowmobile emissions vary..." Please see comments for page 2, paragraph 2, sentence 2. Climate also changes snowmobile emissions." See Montana DEQ Comments

"Page 3, second paragraph, second sentence, "...snowmobile emissions increase with an increase in speed..." This statement is misleading because the highest production of emissions is at idle. White (1998) showed that the hotter the engine is, the lower the emissions—emissions are a factor of engine speed and torque, not snowmobile speed, as indicated in the NPS report." See Montana DEQ Comments

"Page 3, Paragraph 3: The entire analysis or the inventory of emissions is incomplete and inaccurate. It appears that NPS used the FTP certification data for automotive transportation, which is not comparable to the snowmobile data. NPS has left out other vehicles in the park. For example, where in this analyses are the

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Bombardier snowcoaches with emissions that are similar to those of light trucks manufactured prior to 1970 (very high HC and 1,000 gm/mile CO)? Where are the emissions from diesel equipment such as tour busses, NPS maintenance equipment (trucks, plows, groomers) and the 19,100 gallons of gasoline NPS uses in the winter, non-recreational vehicles, and, since no distinction is made on boundaries, traffic and 18-wheelers operating on Highway 191? NPS uses over 63,000 gallons of diesel each year in the Park, (and concessions/contractors use even more) with at least 2 million gallons of gasoline consumed in the Park during the summer (through concessions) with only 225,000 gallons (the Park interior storage limit) in the winter. What emission factors are used for summer and winter vehicles? Does the analyses consider the increase in emissions based on the percentage of Toyota, GM, and Ford products in the inventory since these vehicles are known to emit more pollution products than EPA limits allowed for the (1992-1998) time period stated? Also, snowmobile power at the Yellowstone elevation should be de-rated from the 20.1 bshp average running in the park (White, Carroll, 1998, Appendix B). Please re-check your winter emission calculations for a peak day because they appear to be incorrect. It may help the public to understand your calculations and assumptions by adding the sample calculation to the appendix." See Montana DEQ Comments.

The report is on "air quality impacts of snowmobiles. How does a comparison of snowmobile emissions to an incomplete emissions inventory benefit the understanding of these emissions' impacts and management of these impacts? What is needed is some monitoring method to enable an individual NPS unit to define any snowmobile impacts. The University of Denver is developing one such tool, but this is not indicated in this report. Another tool NPS managers could request from OSHA would be pollutant monitors for areas where staff must work. Such monitoring would help determine public health and occupational exposure concerns would occur wherever there is snowmobile congestion. Such studies might show the need for expensive air quality monitoring of a specific to a location, but it would not mean the entire park unit has an air quality problem." See Montana DEQ Comments.

"Page 3, Paragraph 4, Sentence 5, "Southwest Research Institute also conducted tests on four organics...." This should read "conducted hydrocarbon speciation tests." This statement as written suggests that the writers did not read the entire report or missed the importance of the color figures and appendix C. SwRI conducted hydrocarbon speciation of C1-C13 and C13-C23 following an FTP protocol also listed in the report. The first series covers 189 compounds and the last series covered thousands of compounds. Only four were graphed for a quick comparison. This paragraph also appears to confuse air toxics with polycyclic aromatic hydrocarbons." See Montana DEQ Comments.

"Page 4, top partial paragraph "...1 pound of PAHs per 4-hour visit..." Several reports by the Montana Bureau of Business and Economic Research and others have documented that the average snowmobiler to YNP rides 91 miles and operates the engine for 4-hours throughout the complete day. It appears from the Yellowstone gate numbers that most visitors are there for longer than a 4- hour visit. This statement should replace the word "visit" with "per 4-hours of engine operation." Also, managers and the public may not be as alarmed if the equation and assumptions are printed in an appendix to the DEIS." See Montana DEQ Comments.

"Page 4, first full paragraph, Potential effects on air quality: This paragraph should be titled "potential effects on public health and the environment." The paragraph confuses air quality (ozone) with occupational and personal exposure levels of CO. It would be best split into two or more paragraphs. Sentence eight that begins "Carbon monoxide can affect humans...." should be removed to start a new paragraph below this one with a description of occupational exposure levels and health impacts. It might be of importance to compare some of Kado's (1999) work to benzene (PEL = 1PPM, REL = 0.1 PPM and TLV=0.5 PPM) and toluene (PEL = 200 PPM with a 300 PPM ceiling limit, REL = 100 PPM and TLV=50 PPM) standards. The paragraph on personal exposure should also include the last three sentences in this paragraph." See Montana DEQ Comments.

"Page 4, first paragraph, last sentence, "....vicinity of snowmobile exhaust, such as..." A more appropriate reference should be areas of traffic congestion and poor emission dispersion. This would include toll booths, but also a parking lots and specific winter attractions." See Montana DEQ Comments.

"Page 5, sentences 3 and 4, "...unknown the extent to which either of these...are used in NPS units...." The report should list the NPS units that allow snowmobiles, and the state in which these are located. For example, Minnesota, Iowa, and several other states require the use of ethanol blend year-round. The report would be of better use to decision makers if these items were specified, or if NPS units were given guidance on who to contact to determine if oxygenates are required in an area. See Montana DEQ Comments.

"Page 6, Clean Air Act Designations: NPS should list (in a table or appendix) the NPS units that include Class I airsheds and use snowmobiles. As written, the paragraph implies that all 48 Class I NPS units are in danger of air quality problems from snowmobiles, and this is not the case." See Montana DEQ Comments.

"Page 8, first paragraph, "...correlation between emissions and snowmobiles...Air Resource Specialists 1996)...." This statement is incorrect. The report referenced is a draft report that did not incorporate comments (from Montana Department of Environmental Quality) stating that 85 percent of the data are not valid because of leaks and other equipment problems. A better reference would be Kado et al. 1999 that did correlate particulate matter with the number of snowmobiles on an hourly basis." See Montana DEQ Comments.

"Page 8, last paragraph, "...4-hour exposure...." The paragraph uses the exposure samples in an incorrect manner. It is inappropriate to compare a 4-hour exposure with an 8-hour standard. To properly compare the sample with the standard, the assumption must be made that this was the exposure for the entire shift, and divide the sample amount by the total hours of the shift. Comparisons in the revised draft final from Kado et al. should be used. The samples were taken during the times of highest exposure. They show a need for a follow-up study, and a possible need to move employees between jobs and exposure levels during a shift. They do not show that a standard has been exceeded or approached, which is what these statements imply." See Montana DEQ Comments.

"Page 9, second paragraph, last sentence "...as a result of snowmobile use...." Even though this is a quote from a draft report, it is not accurate. A preliminary air quality model of the area shows that the snowcoaches also contribute significantly to CO and HC because they have no emission controls." See Montana DEQ Comments.

"Page 9, paragraph 3, first sentence "dangerously high." What standard is NPS using to determine that these levels are "dangerously high?" Please remove the word dangerously or cite the corresponding standard used. We agree that employees and visitor exposure needs to be minimized, however, more study is needed before these levels can be categorized as dangerous. Further, the paragraph implies that removal of high levels of snowmobile emissions would resolve all the problems, which is false. The problem really is a high amount of pollution trapped in an area with poor dispersion characteristics. This usually occurs with automobiles and trucks in congested areas. NPS can reduce congestion in certain areas to reduce exposure, and or relocate congestion of winter traffic to areas with better air flow and emission dispersion characteristics." See Montana DEQ Comments.

"Page 9, paragraph 5, Two-stroke vs Four-stroke, first sentence, "...lower amounts of CO...." This statement is incorrect for cold climates. Bishop measured CO of a 4-stroke snowmobile and found that the CO emissions were over twice that of the 2-stroke snowmobiles, although smoke and HC were significantly lower. There is not much difference in CO emissions when the climate is cold because most engines burn rich (with more fuel) under those conditions. Please remove CO from the first and second sentences. White et al. indicated some reduction of CO from direct injection, 2-stroke engines, but not 70 percent." See Montana DEQ Comments.

Our quoting of the Montana DEQ Comments and Mr. Howard Haines is important because of the blatant inaccuracies in the DEIS. The NPS cannot rely on the flawed conclusions in the DEIS about snowmobile emissions. Real, not exaggerated health risks should be analyzed and addressed. To do anything less would violate NEPA, APA, Clean Air Act and the Clean Water Act.

6. Socio-Economic Effects of Alternative B and All Other Alternatives.

Yellowstone, Montana earns its living directly or indirectly because of the long-standing partnership that exists with Yellowstone National Park.

It is important to remember that the town site of West Yellowstone was carved out of the National Forest by an act of Congress nearly one hundred years ago expressly for the purpose of providing essential services to Yellowstone Park's visitors. From then until now, this community has existed to that end. Businesses and lives have been built upon good faith in a continuing partnership effort with Yellowstone National Park. As the number of visitors has grown from year to year, so has West Yellowstone grown to accommodate them. As the number of park service employees has increased, the town has expanded to provide basic health, police, and fire protection. West Yellowstone has grown to meet its obligation to educate NPS employees' children as well as its own. As part of the partnership, the town even disposes of the Park's garbage. The relationship is intimate and completely interdependent. They have historically been partners, but the events of the last few years thereafter that what has been accomplished in this century of working in tandem may soon be forever lost.

The Preferred Alternative B in the DEIS proposes to plow the road between West Yellowstone and Old Faithful in winter. This will effectively destroy the snowmobile dependent winter economy of West Yellowstone. This community has come to depend upon winter business to fund approximately one half of the necessary year-round infrastructure and basic service needs. To compound the problem, many summer businesses are now tied to winter enterprises. If this alternative is implemented, summer reliant motels, restaurants, and retail shops will collapse as surely as winter ones will since mortgages and cash flow issues have come to rely upon four seasons of commerce instead of just one. To remove this critical economic linchpin will render the town non-viable. The question will be not if the community will perish, but how long it will take.

Within the DEIS, great care is taken to prove on paper that access by wheeled vehicles will actually INCREASE the number of visitors to the Park in winter. What the document fails to examine is whether or not people will actually visit Yellowstone in winter if snowmobiling the lower loop is no longer available to them. Unlike some who seem to have been persuaded that the 'field of dreams' approach will work, the town does not believe for one moment that "If you plow it, they will come." Our clients deal daily with visitors to this region. Based upon years of experience and hundreds of conversations with potential visitors, the proprietors and concessionaires in West Yellowstone predict that very few people will make the trip to Yellowstone if they are unable to enjoy the unique snowmobile experience. This is confirmed by the fact that while snowcoaches have always been available as an alternative means of winter transportation, they have never gained popularity with the majority of winter visitors. It follows, then, that people are extremely unlikely to travel across the country in winter to ride in buses or vans. See Comments of Bill Howell, Clyde Seely and Vicki Eggers, incorporated by reference in these comments.

The DEIS estimates that plowing the road from West Yellowstone to Old Faithful will result in a $12.4 million decrease in visitor spending and the loss of 301 jobs in the Greater Yellowstone Area (GYA). [Vol. 1. page 198] The surrounding states estimate that this loss will actually be over $100 million in visitor spending and more than 1,000 jobs in the GYA. [Vol. 2, Appendix]

Alternative B proposes to provide shuttle bus service between West Yellowstone and Old Faithful at a "cost of $10 to $20" per person to "provide affordable access to the Park's interior." [Vol. 1, page 199] This will require a taxpayer subsidy of $25 to $40 per person since it costs an average of $38 per person plus a $10 person park entrance fee to enter the Park on a bus during the summer season.

One of the Park's stated reasons for plowing the road from West Yellowstone to Old Faithful is to "provide affordable access for minority and low-income people" since this segment of the population would now typically have to pay $85 to $100 as day to rent a snowcoach or snowmobile to visit Old Faithful. Yet, in the DEIS, the NPS admits the current income distribution of summer and winter visitors to Yellowstone is quite similar, event though the summer visitors do not have to pay the "high" costs of snowmobile or snowcoach rental. "The 1999 Winter Visitor Survey in the GYA found that 11.9% of winter visitors reported having a 1998 total household income below $15,000. These results are comparable to results found in a 1998 summer visitor survey in YNP where 11.1% of respondents reported a household income below $15,000. The 1999 winter visitor survey reported that 99.0% of all winter recreation visitors in the GYA are white, which compares to summer visitors where 98% are white." [Vol. 1, page 91] It costs all visitors a significant amount of money just to get to the Yellowstone area, regardless of whether they are low, middle or high income, and the cost of a snowmobile, snowcoach, or even a bus rental for that matter, is irrelevant as to whether or not they can afford to visit Yellowstone. [Vol. 1, page 199]

Visitor access from the west entrance would be primarily by mass transit with very limited opportunity for private vehicle access (by reservation only). 10 to 20 trailer spaces would be available at Old Faithful for snowmobile trailer parking, with up to 40 spaces being available for passenger vehicles. All other access would be via 20-30 buses and a fleet of 45 15-pasenger vans departing at 45 minute intervals. Under this scenario, NPS proposes to increase average daily visitation to Old Faithful by almost 130%. [Vol. 1, page 218] This is peculiar since "overcrowding" and the overtaxing of services at Old Faithful has been an issue persistently touted by the NPS. [Winter Visitor Use Management: A Multi-Agency Assessment, Greater Yellowstone Coordinating Committee - March 1999, page 14] See also Comments of Bill Howell.

The NPS Directors Order #17, dated September 28, 1999 National Park Service Tourism Policy 6 purpose "is to promote and support sustainable, responsible, informed, and managed visitor use through cooperation and coordination with the tourism industry." § 1. "It is to each Park's advantage to find common ground with tourism interests." Id. § 3.2. "Conversely, the [National Park Service] must seek to understand the goals, capabilities, and limitations of the tourism industry, and recognize that tourism businesses have financial obligations to meet and investments to protect." Plowing the road will result in great harm to West Yellowstone. There will be little incentive for visitors to stay in West Yellowstone if snowmobiling is discontinued. The busses proposed by Alternative B may result in greater revenue to the Park but will result in devastating its long-time partner, West Yellowstone. NPS policy disallows this and should be followed. The plain language of Directors Order #17 requires the NPS to take action. See Idaho Watersheds Project v. Hahn 187 F. 3d 1035,1037 (9th cir. 1999). That action is to find a way to provide tourism opportunities with the best interests of the gateway communities in mind.

The DEIS has failed to adequately examine the socio-economic impacts of the alternatives upon gateway communities, regions, and states and has failed to implement the socio-economic information the cooperating agencies supplied to the NPS for the DEIS.

7. Sound Concerns

Sound levels for snowmobiles would be required to be at or below 70 decibels as measured on the A-weighted scale at 50 feet at full throttle (as compared to present sound law of 78 decibels or below). [Vol. I, pages 28 and 214] This reduction of 8 decibels would mean snowmobiles would be required to be nearly one-half as loud as they are now (-10 decibels is one-half as loud). By comparison, the sound level for a diesel truck (bus) is 80 decibels at 40 mph at 50' is 60 to 70 decibels (a little Honda is closer to the 60 decibels while a pickup truck is 70 or even 75 decibels). [Vol. 1, page 128] The sound law based on full throttle for a snowmobile is not an equal comparison to other vehicles at 40 mph. First, a snowmobile is operated in the Parks at a maximum speed of 45 mph. Certainly not at full throttle. Second, the sound level for the other vehicles would be much higher if they were also operated at "full throttle" for the comparative sound measurement. Snowmobiles and other vehicles should have equal standards.

D. CONCLUSION

Our clients oppose the preferred Alternative B that would plow the road from West Yellowstone to Old Faithful. The DEIS has not accurately or sufficiently considered the impact of this alternative on surrounding communities, visitor expectation and experience, wildlife, and the resource.

National Parks are established for the use and enjoyment of people. While the Park's resources must be protected for the future, today's special winter visitor experience must also be protected. Touring Yellowstone by snowmobile combines the grandeur of the Park's unique features with the freedom to experience it directly. The DEIS must protect this experience.

Thank you for considering our comments. Please put my name on your mailing list so I can be kept informed on this issue.

Sincerely,

MOORE SMITH BUXTON & TURCKE,
CHARTERED

Susan E. Buxton

cc: Clients

Enclosure

SEB/bai

Page 2. Re: Revised Alternative E. It appears too much emphasis is placed on support or justification for a course of action or decision. Under the CEQ regulations, the requirement of an EIS is to provide a range of reasonable alternatives that clearly define the issues, and to fully evaluate and disclose the possible effects of those alternatives. The DEIS meets this requirement. Revised Alternative E comes from cooperating agencies and the Blue Ribbon Coalition in a variety of forms. The essentials of Revised Alternative E (all versions considered) are not significantly different from alternative E as presented in the DEIS, especially considering the programmatic nature of the proposed action. See the matrix comparison of Revised Alternative E versus the features analyzed in the range of alternatives. All alternatives in the DEIS, including B, meet the purpose and need for action to a greater or lesser degree. In our estimation, it is unrealistic to expect all alternatives in an EIS to meet all desired conditions expressed in the purpose and need for action equally well. Such a set of alternatives would likely have no significant differences among them and fail to meet the CEQ requirement for evaluating a range of options.
Pages 3-4. Re: Particulate matter study. Criticism stemming from the release of the ARD report and its content is beyond the scope of this EIS analysis and requires no response. The report's contents, in respect to the alleged faulty information, was not a part of the Draft EIS. The fact that there may be disagreement with how the document was publicized and distributed does not affect the air resources analysis in the EIS. The release of the document, done independently from the EIS process, was hardly a media blitz. Certainly, the ensuing media coverage, in which the cooperating agencies played a large role, was not encouraged by NPS. The commenter should be aware that the mathematical errors and related comparisons have been corrected in the report, which has been re-released and is available for use in support of the FEIS.
Page 4. Re: Support of alternative E and not B. In general, the tenor of these expressions of support and opposition relate to the decision that the commenter would like to see NPS make, or not make. The general response to such comments is that the commenter's opinions will be considered in making the final decision, but that there is nothing in those opinions that substantively would alter the range of alternative features to be evaluated in the Final EIS. For example, if the features that are not supported were to be deleted from the range of alternatives then the analysis would be left only with features that the commenter likes or agrees with. If only the actions that are liked by the commenter remain, then there is effectively only one alternative. From the NEPA standpoint, the analysis cannot be channeled in this fashion. Therefore, expressions of support or objection will not be responded to, in general, by changes in alternative features – they will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision. People who commented in this fashion are asked to consider that there is a very clear separation between alternatives legitimately considered in an analysis and the expression of a preferred alternative or the decision to be made.
Page 4-7. Re: B.1. Fund for Animals V. Babbitt. How the settlement timeframes were set is not material to the EIS process itself, which must be conducted in accordance with NEPA and the CEQ regulations. Certainly the time frames represent a challenge to all involved in the process. Arguments about extensions do not relate substantively to the adequacy of the EIS or the alternatives in a way that NPS can respond to. NPS will respond to comments on both when presented as such.
Page 7. Re: B.2. Release of the DEIS over the internet. NPS put the DEIS on the internet to meet the requirement of the settlement agreement that the draft be released in August 1999. The plaintiffs in the suit did not object to that method of complying with the settlement agreement. Once the hard copies of the DEIS were available, NPS allowed a 60 day comment period to comply with CEQ requirement for requesting public comment (§1503.1(a)(4)).
Page 8. Re: B3. Small Business Regulatory Enforcement Act. NPS disagrees that it must submit the Winter Use Plan and EIS to Congressional review under the terms of the SBREFA. If a rule change is required as a result of the final decision, NPS will comply with all applicable requirements.

Pages 8-9. Re: B.4. Cumulative impact for planning the road from West Yellowstone to Old Faithful. NPS evaluated the impacts of alternative B and other alternatives that incorporate the features mentioned in this comment. A systematic, interdisciplinary process was used in accordance with CEQ regulations. NEPA does not absolutely require the use of actual data. It requires sufficient information in the context of the scope of analysis, which in this case is programmatic and not site-specific. The EIS analysis is aimed at developing a programmatic plan (§1508.18(b)(2) and (3)) for winter use. If the concern relates to site-specific gaps in information, it should also be noted that there is no requirement to develop exhaustive site-specific information ("hard data") to support a programmatic planning document. An EIS is not, per se, a scientific analysis. It is intended to disclose environmental effects over a range of alternatives, in which the analyses must demonstrate scientific integrity by disclosing methods and making explicit references to sources used (40 CFR 1502.24). The DEIS does this. CEQ regulations also allow for incomplete or unavailable information, by describing procedures that are to be following in these instances (§1502.22). For any identified gaps in the DEIS, NPS will follow the requisite procedures.

The CEQ regulations define special expertise as "statutory responsibility, agency mission, or related program experience" §1508.26. NPS has fully documented its procedures in this regard. Methods of analysis, including assumptions and expertise (in the form of current literature) are revealed for all impact topics at the beginning of DEIS Chapter IV. The EIS preparers and consultants used are listed in Appendix B of the DEIS for all interested parties to see.

Page 10. Re: C.1. Revised Alternative E. Please see response to comment, "Page 2."

Page 10. Re: C.1.a. Actions common to Yellowstone, Grand Teton and the Parkway. Please see responses to Letter 1, Wyoming comments on Revised Alternative E. Most suggested features are evaluated in the DEIS alternative E or in another alternative, so these choices remain for the decision maker. NPS is encouraged by support from the cooperating agencies on establishing a recreation carrying capacity. In practice, setting a carrying capacity is a highly complex and potentially divisive exercise. NPS managers decided there was not sufficient time available in the settlement time frame to devote to this type of analysis. However, in response to EPA and a variety of cooperating agency comments, NPS will analyze the use of interim use limitations to mitigate effects in several alternatives. The seven year average will be used in one or more instances.

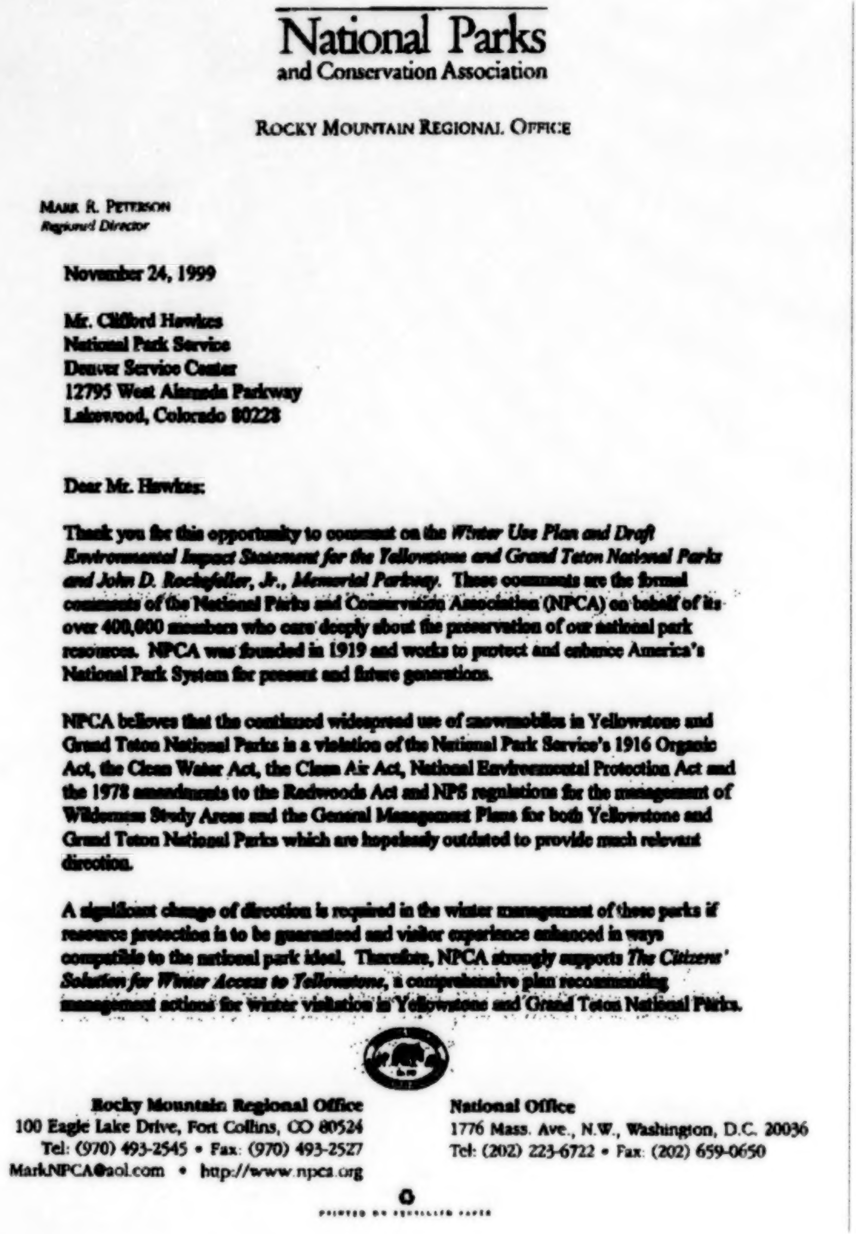
Page 12. Re: C.2. Adaptive management and the Federal Advisory Committee Act. Adaptive management will be better described in the FEIS. Adaptive management is a strategy to move from the existing condition to the desired condition in two alternatives. The strategy represents a very deliberate way of proceeding, erring on the conservative side to maintain existing motorized use at the risk of possible short-term impacts on resources or other visitors. Processes associated with adaptive management will be provided in the FEIS: definitions, administrative actions, study methods, management actions, and NEPA requirements. Although FACA is not necessarily a concern should adaptive management be implemented, any decision that requires ongoing advice from a group of non-agency persons must comply with FACA. This does not necessarily mean that the NPS will charter a formal advisory committee under FACA, as certain exceptions to such formal action are available.

Page 13. Re: Bison Management DEIS/Plan and the Winter Use DEIS; two different methodologies used. Work accomplished by biologists on defining the wildlife affected environment and the effects of winter use on it are cognizant of the carrying capacity issue. Such determinations include many factors other than those associated with winter use. For this reason, NPS holds to its determination that setting carrying capacities is beyond the scope of this effort. The winter use FEIS will be made as consistent as possible with the Bison Management FEIS/Plan. It should be understood that the Bison Management EIS/Plan is not yet published, and no decision has yet been made for bison management. The final EIS for winter use will be made as consistent as possible with the final EIS for bison management in terms of analysis. Certainly the decisions will need to be consistent.

Page 13. Re: C.3.a. Tunnel effect on ungulates and plowing on bison. Refer to responses to Letter 35, John Mundinger. In all alternatives, including B, the effects of plowed roads on ungulates are disclosed. For alternative B, this may be found on DEIS pages 208-209. Although it does not explicitly mention bison, it states that plowed roads may provide "wildlife" with an energy efficient mechanism for movement. The FEIS will be revised to include the effects of plowed roads on bison migration. Although the DEIS does not use the term "tunnel effect" it does discuss the negative impact associated with snow berms along the plowed road corridor, and suggests mitigation (p. 209). NPS and the commenter disagree on whether or not a tunnel effect would result from plowing. In many other areas within the three park units, and in the 3 state area, roads are plowed and no tunnel effect exists. As for the Settlement Agreement, bison monitoring is ongoing and current information pertaining to that effort will be included in the FEIS.
Pages 14-15. Re: C.3.b. Groomed winter roads and bison movement. The bison analysis will be reviewed and updated as necessary. In an effort to better understand the relationship of bison movements and the use of the winter groomed road system, managers have instituted studies that address this issue. While groomed roads may have contributed to the redistribution of bison within park boundaries (Meagher 1997), it appears that bison tend to use waterways and off-road trails for much of their travel on the west side of the park (Bjornlie and Garrott 1998). Their movement toward park boundaries may occur on such routes. Monitoring of bison movements in the Hayden Valley and Mammoth to Gibbon Falls sections of the park has found that less than 12% of bison movements occurred on the groomed road surface (Kurz et al. 1998, 1999). However, groomed roads may have allowed larger numbers of bison to exist in the park than in the absence of groomed roads, by allowing access to otherwise unavailable foraging areas. In addition, westward redistribution early in the winter may predispose some bison to exit the park (Meagher 1997). Therefore closing of groomed roads could have the effect of reducing population size and shifting distribution back to patterns observed before grooming, thereby possibly reducing the magnitude of bison movements outside park boundaries. Conversely, bison are highly social and appear to retain and pass along knowledge through generations (Meagher 1985), so it is possible that closing groomed roads may not impact bison movements and distribution. Research is currently being conducted to better understand the relationship between road grooming and bison movement and distribution patterns.
Page 15. Re: C.3.a. Analysis of wildlife carrying capacities. Work accomplished by biologists on defining the wildlife affected environment and the effects of winter use on it are cognizant of the carrying capacity issue. Such determinations include many factors other than those associated with winter use. For this reason, NPS holds to its determination that setting carrying capacities is beyond the scope of this effort. The winter use FEIS will be made as consistent as possible with the Bison Management FEIS/Plan. It should be understood that the Bison Management EIS/Plan is not yet published, and no decision has yet been made for bison management. Relative to adaptive management, see response to comment, "Page 12. Re: C.2."
Page 15. Re: C.4. Natural quiet requirements. Natural quiet (natural soundscape) is a value that attracts many people to national parks. Commenter is referred to page 126 in the DEIS, and to Appendix C which elucidates on NPS policies relating to this. The sound analysis will be updated for the FEIS to provide more quantitative analysis relative to the concerns expressed.
Pages 16-18. Re: C.4. Water and solid waste quality standards. Please see response to comment, "Pages 8-9." EPA notes that the DEIS includes extensive analysis of the effects from current winter use that demonstrates significant environmental and human health impacts, and that it includes among the most thorough and substantial science base they've seen to support a NEPA document. Regarding air quality and related impacts on water and aquatic resources, the FEIS will incorporate additional data and recent studies in these areas. The comments on sewage spills in Yellowstone are not pertinent to the issue at hand – impacts from winter use. Such events may be more appropriate to a discussion of cumulative impacts. The eventual decision from the winter use EIS will provide direction on monitoring needs pursuant to winter recreation use. Such a decision represents a commitment to funding focused monitoring efforts.

Pages 19-27. Re: C.5. Snowmobile emissions. The ARD report is not pertinent to this discussion. The material cited and discussed by the commenter is not in the DEIS, nor was it part of the DEIS process. Comments were not solicited on the ARD report, but on the DEIS. In the DEIS, the purpose and need for action (Chapter I) indicates there is a gap between existing conditions and desired conditions for air quality and other resources in the parks. Alternative B and other alternatives prescribe actions, or standards for actions, intended to close that gap. The baseline for comparison is the existing condition, as reflected in alternative A. An improvement in air quality would be expected from implementing alternative B, as disclosed in the DEIS. NPS has an affirmative responsibility to protect park values and Class I air quality, and it has the authority to do so. The DEIS states that at any time, if EPA adopts stricter standards applicable to park resources, they will be adopted.
Page 20. Re: C.5. Montana DEQ. The air resources impact analysis will be updated in the FEIS, partly in response to comments from Montana DEQ.
Page 28. Re: C.6. Winter economy of West Yellowstone. The economic impacts of all alternatives are evaluated and disclosed in the DEIS. NPS acknowledges that any decision resulting from this EIS is likely to cause economic change in all local communities. However, a legal decision will not be made or justified until after the final EIS is published, and all alternatives must be considered in the decision process.
Page 28. Re: C.5. Use levels if snowmobiling in lower loop unavailable. The possible impacts of the alternatives on recreation and visitors to the parks are disclosed in the document. The results of the winter use surveys conducted in the parks, which are reported in the DEIS, address this question. With reference to alternative B and plowing the road from West Yellowstone to Old Faithful, there is a clear disagreement on whether or not people will continue to come. Certainly some current users will not; there could be many others who presently decline to snowmobile but would be happy to see Old Faithful in the winter.
Page 29. Re: C.6. Decrease in visitor spending and loss of jobs. The economic analysis will be updated for the FEIS. The states' analyses produce different results. Both analyses will be disclosed, as is appropriate under CEQ regulations.
Page 29. Re: C.6. One stated purpose of plowing the road (DEIS, page 28) is to "improve affordable access" – not, as the commenter states, to "provide affordable access for minority and low-income people". A thorough reading of the EIS would reveal that a required impact topic in an EIS is to evaluate the effects of a proposed action on socially or economically disadvantaged populations (DEIS, page 80). These populations are characterized on page 90 in the DEIS, and the effects on those populations are disclosed in the socioeconomic section for each alternative (DEIS, pp 176, 199, 224, 245, 260, 274, 288). The stated impacts on socially or economically disadvantaged populations are not used as "justification" for plowing in alternative B.
Page 30. Re: Alternative B road plowing, alleged increased use, and overcrowding at Old Faithful: NPS will review the discussion and clarify it as necessary (Ref. DEIS page 218. WVUM page 14).
Page 30. Re: C.6 Plowing the road harmful. The inference is that since people choose to come to parks to snowmobile, they would not choose to experience the Park in any other fashion. The commenter seems to further infer that because the economies have thrived on this demand, then freedom and economic well being in the gateway communities should have priority over any adverse impacts that this use may cause. However, the NPS mandate, as stated in the purpose and need section, places personal enjoyment and freedom of access in a subordinate role to protection of park values so they are unimpaired for future generations. NPS acknowledges that management changes could impact local businesses, particularly those catering to the snowmobile visitor immediately outside the park. NPS is also aware that other opportunities for winter visitors exist. In short, the EIS effort to evaluate various alternatives for winter use will result in a decision fully compliant with the stated policy of sustainable, responsible, informed and managed visitor use.

Page 30. Re: C.6. Failed to adequately examine the socioeconomic impacts. Economic effects of all alternatives are fully disclosed. We fail to understand what the commenter means by the Park Service's "failure to implement the socio-economic information provide by the cooperating agencies." NPS has not disregarded the cooperating agencies' information. According to the CEQ regulations, §1503.3(b), commenting agencies that criticize an analysis methodology should describe an alternative methodology and why it prefers it. The commenter does not specifically indicate what is incorrect about the agency methods used. If there is a significant difference of opinion regarding economics, as there may be in this case, then the remedy provided in CEQ regulations (§1502.9(a)) is to report both opinions in order to meet the disclosure requirement. This approach was taken in the DEIS by reporting the results of NPS studies and the reports from each cooperating agency. Page 83 of the DEIS makes reference to the use of source information provided by the cooperators, all of which is presented in DEIS Appendix A. The characterization of the socioeconomic environment specifically cites information from the cooperators or their consultants, such as Dr. Taylor. On pages 298 through 315, the DEIS discloses the impacts of each alternative on adjacent lands in the cooperating agencies' own terms.
Page 31. Re: 7. Sound Concerns.The analysis of sound will be updated and clarified in the FEIS.



National Parks
and Conservation Association

ROCKY MOUNTAIN REGIONAL OFFICE

MARK R. PETERSON
Regional Director

November 24, 1999

Mr. Clifford Hawkes
National Park Service
Denver Service Center
12795 West Alameda Parkway
Lakewood, Colorado 80228

Dear Mr. Hawkes:

Thank you for this opportunity to comment on the *Winter Use Plan and Draft Environmental Impact Statement for the Yellowstone and Grand Teton National Parks and John D. Rockefeller, Jr., Memorial Parkway*. These comments are the formal comments of the National Parks and Conservation Association (NPCA) on behalf of its over 400,000 members who care deeply about the preservation of our national park resources. NPCA was founded in 1919 and works to protect and enhance America's National Park System for present and future generations.

NPCA believes that the continued widespread use of snowmobiles in Yellowstone and Grand Teton National Parks is a violation of the National Park Service's 1916 Organic Act, the Clean Water Act, the Clean Air Act, National Environmental Protection Act and the 1978 amendments to the Redwoods Act and NPS regulations for the management of Wilderness Study Areas and the General Management Plans for both Yellowstone and Grand Teton National Parks which are hopelessly outdated to provide much relevant direction.

A significant change of direction is required in the winter management of these parks if resource protection is to be guaranteed and visitor experience enhanced in ways compatible to the national park ideal. Therefore, NPCA strongly supports *The Citizens' Solution for Winter Access to Yellowstone*, a comprehensive plan recommending management actions for winter visitation in Yellowstone and Grand Teton National Parks.

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We favor:

- A phase out of all private snowmobile use in the park over the next three years;
- Providing snowcoach access into the park's interior from Mammoth, West Yellowstone and the Flagg Ranch where snowmobile use now is allowed;
- Halting the use of the Continental Divide Snowmobile Trail in Grand Teton National Park while continuing automobile access in the park;
- Closure of Yellowstone's east entrance where only 3% of park visitors travel and where expensive avalanche control efforts involve military explosives that are not in keeping with the purpose of the national parks;
- Providing a greatly expanded research program on the impacts of winter visitation to the parks. Of particular concern is the impact of groomed roads on the movements of park wildlife, particularly bison, and the ramifications of such movements on vegetation and park wildlife;
- Requiring a study to determine the winter carrying capacity of the parks as required by the 1978 amendments to the Redwoods Act. We recommend that the parks use the successful Visitor Experience and Resource Protection (VERP) protocol in determining both resource and social carrying capacity. Establishment of standards and indicators are needed to preserve the parks' resources and visitor experience over time.

Further research is needed on the impacts of snowmobile and snowcoach noise on visitor experience. Data needs to be collected on the noise levels for groups of snowmobiles, not just individual snowmobile sound levels; the distances that these sounds travel in the park; and the impacts on both frontcountry and backcountry park visitors. Beyond noise level, such a study should also address both the sound frequency and the constantly-changing noise levels of the snowmobiles.

Regarding noise, Yellowstone National Park this past year recommended to the National Park Service that the park's Wilderness Study Area designation not be re-submitted to Congress due to the potential impact of noise from possible scenic tour flight aircraft. In NPS' view, does snowmobile noise also contribute to weakening of wilderness values to the point that park areas may not qualify to be preserved in the Wilderness Area Preservation System due to noise intrusions? Is this not an impact on wilderness values? If so, the EIS should address this topic and the parks should strengthen their ability to preserve these values by revising the park significance statement to include natural quiet as a key resource and visitor experience.

If the NPS continues to advocate for its preferred alternative, it needs to conduct a survey to determine the displacement of winter snowmobiling visitors who will, presumably, go to other areas of the park and surrounding national forests because they can no longer snowmobile from West Yellowstone to Old Faithful. To what extent will snowmobilers be displaced and where will they go?

We also recommend that the final document commit the National Park Service to conducting a revised EIS whenever winter use numbers change dramatically upward or new types of uses are practiced in the park by visitors that may harm park resources.

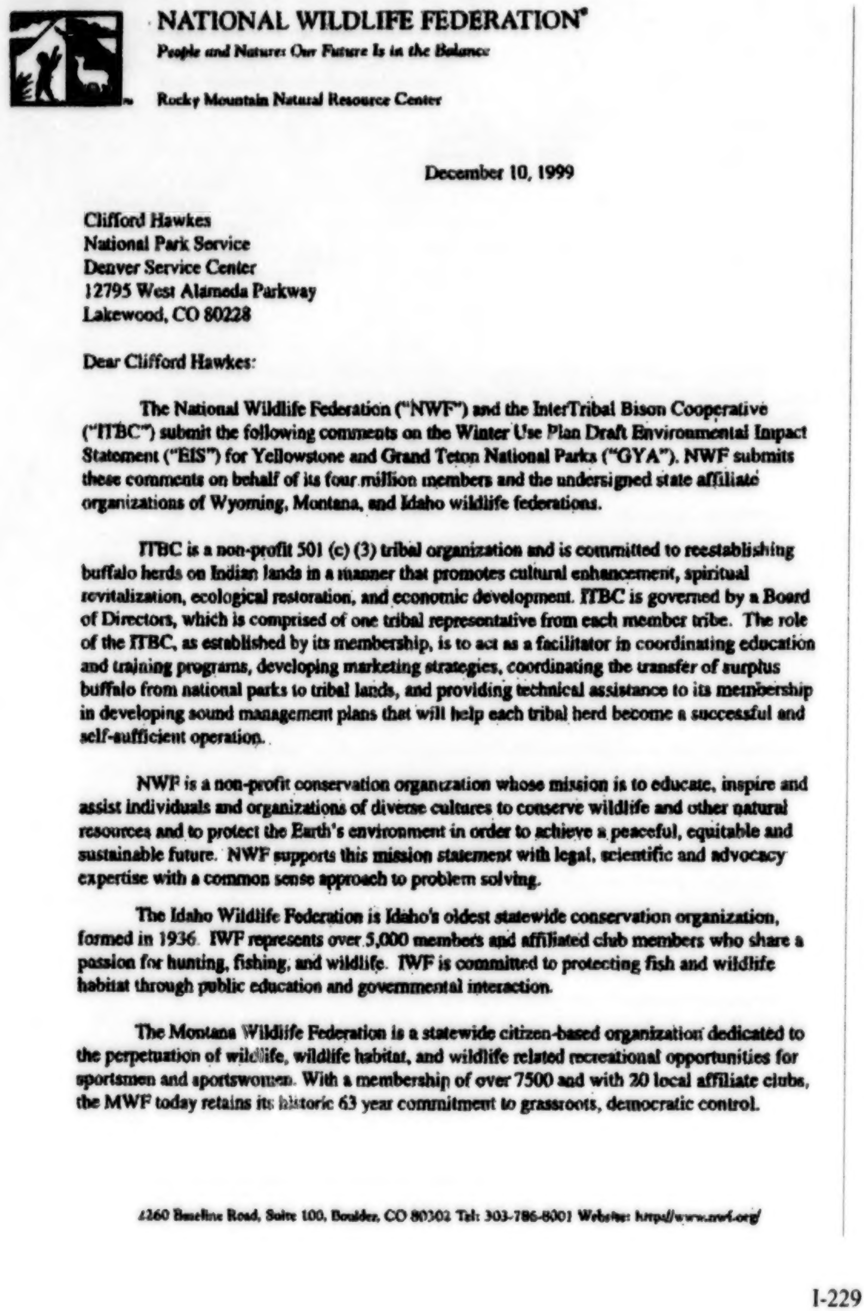
Thank you consideration of these comments. We will look forward to receiving the final winter use plan.

Sincerely,

Mark Peterson

Mark R. Peterson
NATIONAL PARKS CONSERVATION ASSOCIATION

Page 1. Re: The use of snowmobiles in YNP and GTNP violates laws and regulations. The NPS and its basic mandate are authorized under the NPS Organic Act (16 USC 1,2-4) and the General Authorities Act (16 USC 1a through 1a-8): *"The Service thus established shall promote and regulate the use of the Federal areas known as National Parks...by such means and measures as to conform to the fundamental purposes of the said Parks...which purpose is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."* An EIS is necessary to evaluate alternative choices for plans while revealing the possible environmental impacts of activities that may be included in the plan. All alternatives presented in the EIS meet the purpose and need for action. The purpose and need for action in an environmental impact statement (EIS) is a brief statement specifying the underlying purpose and need to which the agency is responding in proposing the alternatives, including the proposed action. The need to develop a plan through an EIS is indicated by the difference between overall desired condition and the conditions that presently exist. The desired condition reflects the parks' mandates, and is articulated in the EIS as series of general objectives. The final plan will be designed to move the existing condition toward the desired condition. The effects of all the alternative actions on natural resources, public health and safety, socioeconomics, adjacent lands and visitor access and experience are analyzed in the EIS, Chapter IV, Environmental Consequences. The eventual decision will make a finding about impacts on resources relative to the mandates and regulations cited in the comment.
Page 1. Re: Support for Citizens' Solution. Comments place a great deal of emphasis on support or justification for a course of action or decision. Under the CEQ regulations, the requirement in an EIS is to provide a range of reasonable alternatives that clearly define the issues, and to fully evaluate and disclose the possible effects of those alternatives. The DEIS meets this requirement. Comments of support or nonsupport go to the decision to be made; they do not affect the range of alternatives considered.
Page 1. Re: Suggested alternative features. The essentials of the "Citizen's Solution are not greatly different from alternative G as presented in the EIS. See the matrix comparison of the Citizens' Solution versus the features analyzed in the range of alternatives in Chapter II.
Page 2. Re: Research needs. The NPS agrees that the analysis presented in the EIS concerning the sound emissions of oversnow vehicles must address frequency, distance traveled and the effects on park visitors. The analysis of the effects of snowmachine sound will be revised in the FEIS to include this information.
Page 2. Re: Wilderness values. Wilderness values consist of elements that are intrinsic to wilderness, as well as elements that are experiential and relative to people's appreciation of wilderness. The analysis does not avoid the subject of wilderness values, rather it considers impacts on factors like natural soundscapes, scenic quality, wildlife and air quality. Such elements are considered important wilderness components and impacts on them are considered in the disclosure of effects in Chapter IV, Environmental Consequences. Because of this disclosure, and because proposed actions are overtly designed to avoid impacting proposed and recommended wilderness, this topic was dismissed from further consideration.
Page 3. Re: Displacement of snowmobile users on to adjacent lands. The analysis of effects on adjacent lands, including the effects of displaced recreationists will be revised in the FEIS.



NATIONAL WILDLIFE FEDERATION®
People and Nature: Our Future Is in the Balance
Rocky Mountain Natural Resource Center

December 10, 1999

Clifford Hawkes
National Park Service
Denver Service Center
12795 West Alameda Parkway
Lakewood, CO 80228

Dear Clifford Hawkes:

The National Wildlife Federation ("NWF") and the InterTribal Bison Cooperative ("ITBC") submit the following comments on the Winter Use Plan Draft Environmental Impact Statement ("EIS") for Yellowstone and Grand Teton National Parks ("GYA"). NWF submits these comments on behalf of its four million members and the undersigned state affiliate organizations of Wyoming, Montana, and Idaho wildlife federations.

ITBC is a non-profit 501 (c) (3) tribal organization and is committed to reestablishing buffalo herds on Indian lands in a manner that promotes cultural enhancement, spiritual revitalization, ecological restoration, and economic development. ITBC is governed by a Board of Directors, which is comprised of one tribal representative from each member tribe. The role of the ITBC, as established by its membership, is to act as a facilitator in coordinating education and training programs, developing marketing strategies, coordinating the transfer of surplus buffalo from national parks to tribal lands, and providing technical assistance to its membership in developing sound management plans that will help each tribal herd become a successful and self-sufficient operation.

NWF is a non-profit conservation organization whose mission is to educate, inspire and assist individuals and organizations of diverse cultures to conserve wildlife and other natural resources and to protect the Earth's environment in order to achieve a peaceful, equitable and sustainable future. NWF supports this mission statement with legal, scientific and advocacy expertise with a common sense approach to problem solving.

The Idaho Wildlife Federation is Idaho's oldest statewide conservation organization, formed in 1936. IWF represents over 5,000 members and affiliated club members who share a passion for hunting, fishing, and wildlife. IWF is committed to protecting fish and wildlife habitat through public education and governmental interaction.

The Montana Wildlife Federation is a statewide citizen-based organization dedicated to the perpetuation of wildlife, wildlife habitat, and wildlife related recreational opportunities for sportsmen and sportswomen. With a membership of over 7500 and with 20 local affiliate clubs, the MWF today retains its historic 63 year commitment to grassroots, democratic control.

2260 Baseline Road, Suite 100, Boulder, CO 80302 Tel: 303-786-8001 Website: http://www.nwf.org/

The Wyoming Wildlife Federation, a non-profit organization established in 1937, is a conservation and recreation advocacy organization. WWF consists of over 4,000 anglers, bikers, hunters and outdoor enthusiasts who share a deep commitment to protecting wildlife habitat, quality ethical hunting and fishing, and public lands in Wyoming. The WWF educates its members about pressing wildlife and recreation issues throughout the state and empowers them to take actions that protect wildlife habitat and the rights of public land users.

The GYA is considered by many as a unique place, not just from a geological and environmental perspective, but also as a model for environmental preservation. The wilderness and wildness of Yellowstone is an image important to nearly every American. From its inception as the first National Park to the recovery of the wolves, Yellowstone National Park offers a glimpse of what our nation once was, and what some areas of our nation may once again be.

With the advent of oversnow transportation accompanied by a prosperous economy, our society now has the means to recreate more frequently and even in seasons when people had been nearly excluded from Yellowstone. As a result Yellowstone has witnessed an exponential increase in winter visitors. For Yellowstone to maintain the natural values that set it apart from the rest of the country, values cherished by the American people, hard choices must be made regarding the motorized accessibility and total human visitor capacity of Yellowstone during all seasons.

We believe that rather than simply focusing on the types of vehicles people use to access the Park during the winter and what roads should be closed, groomed or open, the National Park Service ("NPS") should evaluate and plan for how many visitors it can accommodate during the winter. A winter visitor carrying capacity may be stratified by the kinds and amounts of vehicles used to access the Park. Visitation can be increased or decreased based on the impacts of the various vehicles used to access the Park. For example, different oversnow vehicles have different kinds and levels of pollution impacts on Yellowstone's resources per person carried. More people could access the Park using mass transit than individual vehicles on a quantity of emission released basis. Snow machines utilizing current technologies pollute air and water and produce more noise than technologically advanced machines. Therefore, the number of visitors accessing Yellowstone with older machines should be lower than the number of individuals using more technologically advanced machines. For the long term benefit of people and the Park's resources, addressing visitor carrying capacity based on emissions, wildlife impacts and impacts to other natural resources is the best way to approach this issue

Our second major concern regarding the Winter use EIS is the complete and full integration between the Yellowstone Bison EIS and the Winter Use EIS. In no way should the Winter Use EIS compromise or constrain the ability of the Park Service to maintain the Yellowstone Bison Herd. It is imperative that there is no opportunity for the state of Montana to claim that a change in winter access management now removes previous constraints to lethal bison management within the Park.

Specific Comments and Recommendations

Management of winter access to Yellowstone must in no way via grooming or plowing initiate or facilitate the Montana Department of Livestock's argument to enter the Park and conduct bison management within the Park. Of equal concern is bison migration patterns related to transportation routes within the Park. We adamantly opposes any transportation plan that may facilitate the migration of bison from Yellowstone into the state of Montana.

Our concern is supported by 61% of surveyed Park users who agreed with the statement "I am concerned about the possible disturbance of YNP wildlife in the winter." (Page 91) Page 116 states that bison migration is greatly affected by grooming. "Major movements occurred from the Pelican Valley into Hayden Valley, primarily using park-groomed roads." Overall effects of migration pattern influence is unknown, however facilitating movement may lead towards an increase in migration outside of the Park.

✓ *We do not support increasing the number of groomed or plowed roads and trails, nor do we support increasing the total miles of existing groomed or plowed roads and trails.*

We believe it is the duty of the NPS to fully integrate the final alternative of the Bison DEIS into this EIS to assure full compatibility and facilitation rather than to establish any contradictory plans. We urge the NPS to consider the effects of this EIS on bison and other wildlife and to integrate this EIS with the Bison DEIS.

✓ *We recommend integrating the Bison DEIS with the Winter Use DEIS.*

In the spirit of the above comment we believe it is integral to monitor bison migration patterns in conjunction with plowed and groomed roads and trails. Since 1967 bison, elk and other animals have been allowed to reach population levels dictated by environmental conditions. (Page 115) As bison begin to migrate on these transportation routes, these routes should be temporarily closed and not maintained. This management technique may discourage bison from migrating out of the Park.

✓ *We recommend creating a buffer zone for bison migration by temporarily closing roads and trails that act as bison migration routes.*

We recognize the interconnection between clean air, clean water, and healthy wildlife. Any transportation methods allowed in Yellowstone must meet appropriate Clean Air Act regulations for the Park. Yellowstone is part of the largest Class I airshed in the lower 48 states and requires strict emission standards to assure no diminishment of this airshed. Under EPA guidelines, the Park must maintain EPA's regulations concerning the Clean Air Act and Prevention of Significant Deterioration (PSD). Under the PSD provisions, a consumption of increment to baseline must be established and models of future consumption must be figured.

Page 95 states that National Ambient Air Quality Standards (NAAQS) violations occurred during an NPS monitoring study at West Yellowstone. Page 107 states that the major sources of air pollutants in the area are those emitted locally by motor vehicles concentrated along motorized routes, and smoke from wood fires.

✓ *Yellowstone is part of a Class 1 airshed, and the NPS must comply with the Clean Air Act and the Prevention of Significant Deterioration provision.*

Emissions from snowmobiles is currently a concern of many. We recommend setting a maximum limit on the amount of emissions in the Park, using the Clean Air Act as the guideline. NWF recommends limiting emissions by limiting the number of snowmobiles that may enter the Park daily. This number may fluctuate with the implementation of better snowmobile technology. This strategy will act as an incentive for the snowmobile industry to improve the emission performance of these machines.

Page 94 states that snowmobile emissions studies conducted by the NPS indicate CO (carbon monoxide) and PM (particulate matter) concentrations were high enough to cause health and air quality concerns in the following four locations:

1. West Yellowstone, Montana.
2. Along the snowmobile trail to Old Faithful.
3. In the parking area at Old Faithful.
4. Near Flagg Ranch where visitors wait to enter the Park.

✓ *Emissions in Yellowstone must be limited by limiting the number of snowmobiles in the Park. The maximum number may change as emissions from snowmobiles change. The maximum limit should be based on the Clean Air Act and its regulatory standards.*

Other Concerns in the EIS

Socioeconomic

For the GYA, the socioeconomic section states that economic concerns vary, are inconsistent, and are not expected to fluctuate based on changes in the Winter Use Plan. Page 84 states that because of the world-renowned recreational resources available to the public within the GYA, these sectors (retail trade relating to recreation) are expected to continue to grow in importance.

Page 89 states that economic benefits to private entrepreneurs do exist; Montana reported $40 million in nonresident expenditures annually for snowmobile activities. Economic benefits also vary greatly within the GYA from county to county. In the context of the total economy, expenditures by winter park visitors is a small portion of total GYA annual economic output. The top three values and expectations of visitors according to a NPS survey are to view natural scenery, to have fun, and to view bison. (Page 152) Survey respondents cared least about YNP as an economic resource.

Furthermore, the purpose and mission of the National Park System is not to further local economic benefit, but rather:

> "...to promote and regulate the use of the...national parks...which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

✓ *Socioeconomic concerns for decision-making purposes in Yellowstone and other National Parks should be a lower priority compared to maintaining the natural resources of the Park.*

Public Health & Safety

The public health section of the DEIS highlights the concern for snowmobile emissions and air quality. With ambient air quality at times exceeding federal air quality standards, it is apparent that some measures must be taken to lower exposure to visitors and wildlife.

Air quality is not the only public health issue affected by the final decisions on oversnow travel. Page 98 states that from 1995 to 1998 in Yellowstone National Park, 70% of all reported vehicular accidents were snowmobile related. From a common sense perspective, snowmobile use, speed and limitation to daylight hours only must be regulated to restore a clean and safe environment for the park visitors, and wildlife.

✓ *Snowmobile activity must be more strictly regulated for the health and safety of the public and wildlife.*

Natural Resources

This section states that engine noise from snowmobiles and snowplanes is occasionally audible within background sound levels. Page 126 addresses the natural quiet as an essential component of Yellowstone. Natural quiet is an important element of what makes Yellowstone a national treasure. Without the sound of stillness, a great aspect of what makes Yellowstone special is gone.

> "An important part of the mission of the NPS is to preserve or restore the natural soundscape associated with national parks. The natural soundscapes are the unimpaired sounds of nature, and are among the intrinsic elements that combine to form the environment of our national parks." (Pg 126)

✓ *We urge the NPS to implement a winter use plan that will restore maintain the natural quiet and stillness to Yellowstone.*

Cultural Resources

Page 132 addresses the ethnographic resources defined by the EIS as features of the landscape that are linked by members of a contemporary community to their traditional way of life. The EIS recognizes the Yellowstone bison herd as one of the most important ethnographic resources. Page 133 defines cultural landscapes as a reflection of human adaptation and use of natural resources and includes ethnographic landscapes. Therefore, the bison herd is not only an ethnographic resource of the utmost importance, but also as an integral part of the cultural landscape. Our organizations have collaborated for several years on bison issues. ITBC is nationally recognizes as an authority on bison issues as a cultural and subsistence resource. NPS must work closely with ITBC to assure the integrity and continuity of the bison herd as an important ethnographic resource for Native Americans.

✓ *NPS must work with ITBC to develop appropriate management guidelines for the bison as an ethnographic resource, and for the appropriate management of all activities affecting this resource.*

Visitor Access and Circulation

Page 136 of the Draft EIS outlines the management of the 14 segments of roadways and motorized trails. The segments are either plowed or groomed at daily or bidaily frequencies. To keep with the values of Yellowstone (air quality, noise quality, human safety, natural landscape, etc.) the miles of groomed or plowed roads, and the frequency with which these roads are groomed or plowed, is excessive and compromises the purpose of the park. The burden of providing snow based recreational opportunities does not lie solely upon the Park, but also in concert with the surrounding National Forests.

✓ *The frequency and mileage of groomed and plowed roads and trails should be minimal. Recreational activities for motorized snowmachine users exist in the National Forests surrounding Yellowstone.*

We recognize the limitations that may be placed on snowmobilers and that some may be concerned about the local economy. However, we also recognize the vast opportunities for snowmobile use in the national forests adjacent to Yellowstone such as Shoshone National Forest to the east, Gallatin National Forest to the north, and west. A comprehensive winter use plan should incorporate all of the winter use opportunities on all of the federal lands within the GYA to more fully and completely plan for public use of these resources.

The Alternatives

We the undersigned cannot endorse any of the alternatives offered in the EIS because they fail to meet our fundamental goals of managing access by determining a visitor carrying capacity, minimizing impacts to wildlife, minimizing air, water and noise pollution and not facilitating

entry by the state of Montana to destroy the Yellowstone Buffalo Herd. Listed below are the positive and negative aspects of each of the alternatives as perceived by the undersigned.

Alternative B offers three positive actions:

1. **Continue scientific studies in re: impacts of winter visitor use and park resources and close selected areas if no other possible mitigation method is available.**

2. **Implement information program cooperation with local communities.**

3. **Establish advisory committee to phase and implement emission standards.**

However Alternative B establishes 6 miles of new oversnow motorized trails An increase in trail mileage will only increase the impacts of man in Yellowstone, not minimize the impacts, therefore *We cannot endorse this alternative*. Effects on wildlife for Alternative B are nearly the same as Alternative A which are generally moderate, adverse and long-term, primarily caused by fragmenting habitat.

Alternative C recommends restricting passage from Norris to Canyon to Fishing Bridge for snowcoach use only from mid-February to mid-March. This proposal is a positive action. However, *We cannot support Alternative C* due to the establishment of winter campsites, 10 miles of new motorized trails, lengthened winter season, increased plowed roads, and an increased number of warming huts and other day-use facilities. These actions will increase the impact to the Park and will ultimately be a detriment to the wildlife. Effects on wildlife include the increased potential of displacement and avoidance of habitats along West Yellowstone to Old Faithful Road. Fragmentation caused by this alternative is negligible to minor in the short-term. This alternative slightly increases potential effects compared to alternative A.

Alternative D offers the following positive actions:

1. **Implement information and enforcement program for late-night oversnow travel prohibition.**

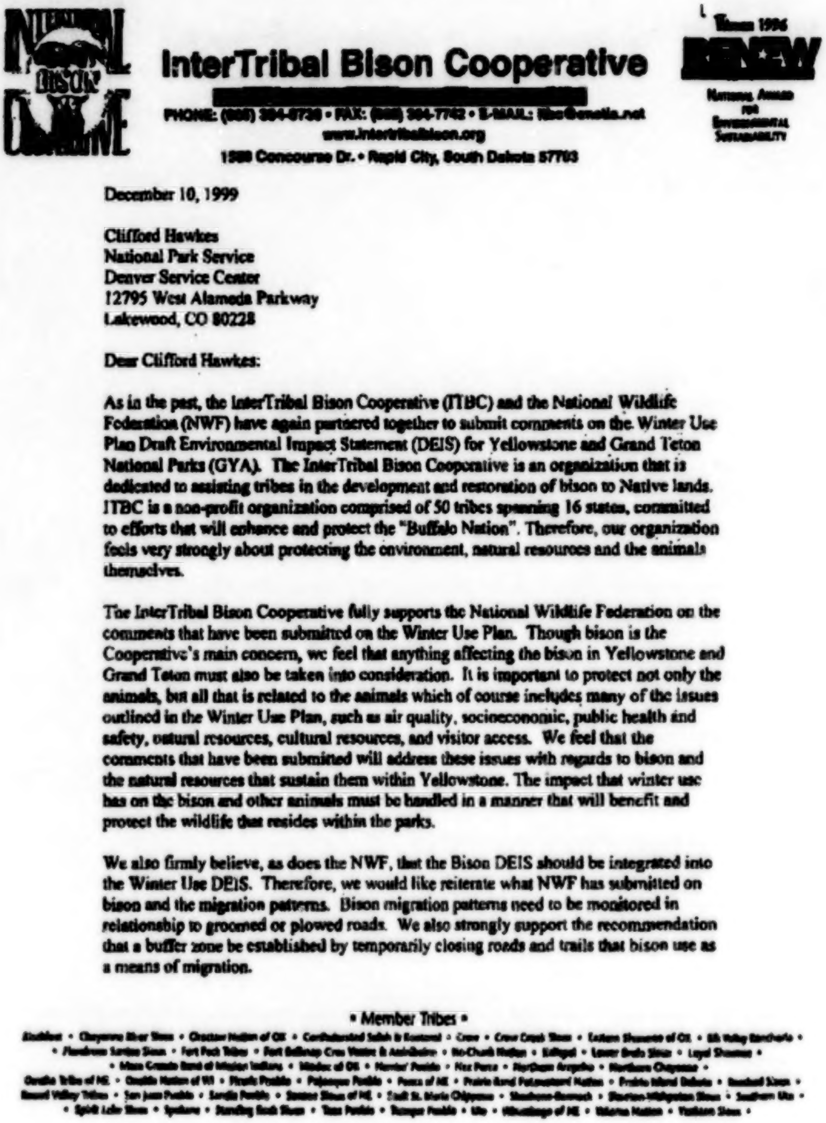
2. **Close East entrance road.**

3. **Oversnow vehicle sound emissions must be at or less than 60 dB(A).**

4. **Phase in alternative fuel/lube sales.**

5. **Phase in more stringent standards for oversnow vehicle emissions.**

However, *We cannot support alternative D* due to the establishment of 15 miles of new oversnow motorized trails. Overall, however, this alternative does decrease the effects on ungulates relative to alternative A.



InterTribal Bison Cooperative

[redacted]

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Winner 1996
RENEW
National Award
for
Environmental
Sustainability

December 10, 1999

Clifford Hawkes
National Park Service
Denver Service Center
12795 West Alameda Parkway
Lakewood, CO 80228

Dear Clifford Hawkes:

As in the past, the InterTribal Bison Cooperative (ITBC) and the National Wildlife Federation (NWF) have again partnered together to submit comments on the Winter Use Plan Draft Environmental Impact Statement (DEIS) for Yellowstone and Grand Teton National Parks (GYA). The InterTribal Bison Cooperative is an organization that is dedicated to assisting tribes in the development and restoration of bison to Native lands. ITBC is a non-profit organization comprised of 50 tribes spanning 16 states, committed to efforts that will enhance and protect the "Buffalo Nation". Therefore, our organization feels very strongly about protecting the environment, natural resources and the animals themselves.

The InterTribal Bison Cooperative fully supports the National Wildlife Federation on the comments that have been submitted on the Winter Use Plan. Though bison is the Cooperative's main concern, we feel that anything affecting the bison in Yellowstone and Grand Teton must also be taken into consideration. It is important to protect not only the animals, but all that is related to the animals which of course includes many of the issues outlined in the Winter Use Plan, such as air quality, socioeconomic, public health and safety, natural resources, cultural resources, and visitor access. We feel that the comments that have been submitted will address these issues with regards to bison and the natural resources that sustain them within Yellowstone. The impact that winter use has on the bison and other animals must be handled in a manner that will benefit and protect the wildlife that resides within the parks.

We also firmly believe, as does the NWF, that the Bison DEIS should be integrated into the Winter Use DEIS. Therefore, we would like reiterate what NWF has submitted on bison and the migration patterns. Bison migration patterns need to be monitored in relationship to groomed or plowed roads. We also strongly support the recommendation that a buffer zone be established by temporarily closing roads and trails that bison use as a means of migration.

• Member Tribes •

Blackfeet • Cheyenne River Sioux • Choctaw Nation of OK • Confederated Salish & Kootenai • Crow • Crow Creek Sioux • Eastern Shawnee of OK • Elk Valley Rancheria •
• Flandreau Santee Sioux • Fort Peck Tribes • Fort Belknap Gros Ventre & Assiniboine • Ho-Chunk Nation • Kalispel • Lower Brule Sioux • Loyal Shawnee •
• Mesa Grande Band of Mission Indians • Modoc of OK • Nambe' Pueblo • Nez Perce • Northern Arapaho • Northern Cheyenne •
Omaha Tribe of NE • Oneida Nation of WI • Picuris Pueblo • Pojoaque Pueblo • Ponca of NE • Prairie Band Potawatomi Nation • Prairie Island Dakota • Rosebud Sioux •
Round Valley Tribes • San Juan Pueblo • Sandia Pueblo • Santee Sioux of NE • Sault St. Marie Chippewa • Shoshone-Bannock • Sisseton-Wahpeton Sioux • Southern Ute •
• Spirit Lake Sioux • Spokane • Standing Rock Sioux • Taos Pueblo • Tesuque Pueblo • Ute • Winnebago of NE • Yakama Nation • Yankton Sioux •

ITBC and NWF have worked closely in the past few years on issues related to the bison and Yellowstone. We will continue to work together until we are satisfied that the best interest of the bison, and other wildlife, has been taken into consideration. ITBC is deeply committed to insuring that the bison in Yellowstone and other national parks are protected. ITBC will work with the National Park Service to develop an appropriate management plan for bison that address natural resources and cultural resources.

ITBC cannot endorse any of the alternatives that have been offered in the DEIS, but again supports NWF in the comments related to these alternatives. We feel it is very important to continue scientific studies in the park related to bison and other natural resources, and ITBC would offer its assistance to the Parks in establishing and monitoring research as it relates to bison and other wildlife.

We thank you for reviewing the comments that have been submitted on behalf of ITBC and the NWF We hope to work with you on this issue and others related to the Buffalo Nation in the future.

Tim Wapato
Tim Wapato
Executive Director of ITBC

Louis LaRose
Louis LaRose
President of ITBC

NATIONAL WILDLIFE FEDERATION AND INTERTRIBAL BISON COOPERATIVE
Page 2. Re: Determining visitor use capacities. Setting a carrying capacity is a highly complex and potentially divisive exercise. NPS managers decided there was not sufficient time available in the settlement time frame to devote to this type of analysis. Regardless of which alternative is decided upon in the Record of Decision, a carrying capacity study will be in place within two years, and the FEIS will set interim visitor use levels. More explanation of the carrying capacity issue will be included in the FEIS, and mitigation features for the alternatives will include carrying capacity analyses.
Page 2 and Page 3. Re: Integration of the Bison Management EIS/Plan and Winter Use EIS. NPS is working to ensure that the Winter Use Plan and the Bison Management EIS/Plan are coordinated and consistent in regard to the effects of winter use on bison.
Page 3. Re: No increase in groomed or motorized routes. This feature is included in alternatives A, E, F, and G. Expressions of support or objection will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision. There is a very clear separation between alternatives legitimately considered in an analysis and the expression of a preferred alternative or the decision to be made.
Page 3. Re: Closing the roads that allow for the migration of bison out of the park. The bison analysis will be reviewed and updated as necessary. In an effort to better understand the relationship of bison movements and the use of the winter groomed road system, managers have instituted studies that address this issue. While groomed roads may have contributed to the redistribution of bison within park boundaries (Meagher 1997), it appears that bison tend to use waterways and off-road trails for much of their travel on the west side of the park (Bjornlie and Garrott 1998), and that much of their movement toward park boundaries may occur on such routes. Monitoring of bison movements in the Hayden Valley and Mammoth to Gibbon Falls sections of the park has revealed that less than 12% of bison movements occurred on the groomed road surface (Kurz et al. 1998, 1999). However, groomed roads may have allowed larger numbers of bison to exist in the park than in the absence of groomed roads, by allowing access to otherwise unavailable foraging areas, and westward redistribution early in the winter may predispose some bison to exit the park (Meagher 1997). Therefore, closing of groomed roads could have the effect of reducing population size and shifting distribution back to patterns observed before grooming, thereby possibly reducing the magnitude of bison movements outside park boundaries. Conversely, bison are highly social and appear to retain and pass along knowledge through generations (Meagher 1985). Thus, it is possible that closing groomed roads may not impact bison movements and distribution. Research is currently being conducted to better understand the relationship between road grooming and bison movement and distribution patterns.
Page 4. Re: Legal mandates. The NPS fully intends to comply with the Clean Air Act and the Prevention of Significant Deterioration provision. Additional work is being accomplished on air quality, including the modeling of air quality impacts, which will be incorporated into the FEIS.
Page 4. Re: Setting a maximum limit on emissions. Limiting emission levels will be addressed in the FEIS under the context of setting carrying capacities. More explanation of the carrying capacity issue will be included in the FEIS, and mitigation features for the alternatives will include carrying capacity analyses. Furthermore, additional work is being accomplished on air quality and will be incorporated into the FEIS.
Page 5. Socioeconomic concerns should be a lower priority compared to maintaining natural resources. Under NEPA, there are no specific regulations requiring the protection of social values, but the consideration of social and economic impacts are routinely done in any environmental analysis. There are several major reasons for this. First, the scoping process as conducted under §1501.7 inevitably raises the social and economic effects of a proposed action. In many instances, these are regarded as significant issues. Second, the impacts must be considered in the context of society as a whole, the affected region, the affected interests, and the locality (§1508.27(a)). Third, the intensity of impacts on the quality of the human environment must be gauged (§1508.27(b)), where "human environment" is to be viewed comprehensively (§1508.14). Effects (direct, indirect and cumulative) are defined as including both economic and social impacts (§1508.8). The NPS mandate, as stated in the Organic Act and General Authorities Act, emphasizes protection of park resources above all other park values, including socioeconomic. It will be up to the decision-maker to weigh the available data, evaluate the possible impacts of each alternative, and decide if park resources are impaired. The impacts in question are not on their face indisputable, and it is the function of an EIS to focus the issues by

NATIONAL WILDLIFE FEDERATION AND INTERTRIBAL BISON COOPERATIVE
addressing those impacts as well as possible.
Page 5. Re: Additional socioeconomic concerns. NPS should regulate snowmobiling for the health and safety of the public and wildlife. The effects of snowmobiling on the public and on wildlife were assessed for all alternatives. The commenter's opinions will be considered in making the final decision, but there is nothing in this suggestion that would alter the range of alternative features to be evaluated in the FEIS. Expressions of support or objection will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision. There is a very clear separation between alternatives legitimately considered in an analysis and the expression of a preferred alternative or the decision to be made. 3) NPS should implement a winter use plan that will restore and maintain the natural quiet and stillness. The effects of noise on the natural quiet of the parks were assessed for all alternatives. Additional information acquired since the DEIS will be incorporated into the FEIS. See also response to Point 2 above.
Page 6. Re: 1) NPS working with ITBC. NPS received and will consider comments on the DEIS from the ITBC. Throughout the planning process, NPS has and will continue to consult with the eight contemporary American Indian Tribes traditionally affiliated with the GYA (P. 133).
Page 6 Re: Frequency and mileage of groomed roads should be minimal. Several alternatives include provisions for decreasing the mileage of groomed roads over the current scenario. Expressions of support or objection will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision. There is a very clear separation between alternatives legitimately considered in an analysis and the expression of a preferred alternative or the decision to be made.
Page 6. Re: None of the alternatives are supported. Statements of opposition relate to the decision that the commenter would like to see NPS make. Please see earlier response to this letter in regard to page 5 "Socioeconomic concerns."
Page 7. Re: Statements of opposition relate to the decision that the commenter would like to see NPS make. Please see earlier response to this letter in regard to page 5 "Socioeconomic concerns."
Page 8. Statements of opposition relate to the decision that the commenter would like to see NPS make. Please see earlier response to this letter in regard to page 5 "Socioeconomic concerns."
Page 8. Re: Modify alternative F to include visitor use carrying capacity. Please see earlier response to this letter in regard to page 5 "Socioeconomic concerns." Setting a carrying capacity is a highly complex and potentially divisive exercise. NPS managers decided there was not sufficient time available in the settlement time frame to devote to this type of analysis. Regardless of which alternative is decided upon in the Record of Decision, a carrying capacity study will be in place within two years, and the FEIS will set interim visitor use levels. More explanation of the carrying capacity issue will be included in the FEIS, and mitigation features for the alternatives will include carrying capacity analyses.

Predator
Conservation
Alliance

Saving A Place for America's Predators

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pca@predatorconservation.org • www.predatorconservation.org

December 13, 1999

Mr. Clifford Hawkes
National Park Service
12795 W. Alameda Parkway
Denver, CO 80228

Re: Yellowstone Winter Use Plan

Dear Mr. Hawkes:

We are writing in response to the Winter Use Plan Environmental Impact Statement (EIS) on behalf of Predator Conservation Alliance (formerly, "Predator Project") and its 1000 members from the northern Rockies and High Plains regions and across the United States. Predator Conservation Alliance works to conserve and restore ecological integrity by protecting predators and their habitats. Its geographic area of focus is the U.S. northern Rockies and High Plains regions, including the Greater Yellowstone Ecosystem. Predator Conservation Alliance was a co-plaintiff in the original lawsuit against Yellowstone National Park for the adverse effects of grooming the park roads for snowmobiles on threatened and endangered species in the park, particularly imperiled predators like the grizzly bear.

We appreciate that the Park Service has finally developed a plan to manage winter use in Yellowstone. Yet, we are concerned that the analysis does not address some of the most important ways that the escalating winter use of Yellowstone affects wildlife and other park resources. We are particularly concerned that the preferred alternative fails to resolve the adverse effects of winter use on wildlife in the park, even those that were identified in the EIS. In fact, none of the proposed alternatives fully provides for the protection of the park's resources that are threatened by winter use. In the absence of a sound alternative by the Park Service, we propose our own.

From the standpoint of the grizzly bear, wolf, lynx, wolverine, and other native predators in Yellowstone Park (and many other of its natural resource values as well), the best alternatives would be either to close the park in winter to motorized use entirely, or to install an elevated monorail system for winter visitors. We believe that the Park Service should seriously evaluate this latter alternative as a long-term goal, but in the short term we acknowledge that neither of these options are feasible. We also acknowledge that Yellowstone and its wildlife need advocates, and opportunities for people to experience Yellowstone in winter in a manner that does not harm the park and its wildlife may be very important to ensuring their ongoing protection. Thus, we support a strengthened "mass transit" alternative, that bans snowmobiles park-wide, but allows the park's roads (other than the East Entrance) to be packed for snowcoaches, with one important caveat: *park roads should only be packed provided that the bison management plan is reformed to tolerate free-ranging bison outside of the park.* The EIS fails to acknowledge that the only effective way to mitigate the adverse effects of packed roads on imperiled wildlife is to address the deficiencies of the current bison management plan, where bison that leave the park on the packed roads are herded and slaughtered at the park border, and shipped out of the ecosystem. The alternative that best addresses these issues is the "Citizen's Proposal" proposed by Greater Yellowstone Coalition and other conservation groups.

In its comments, Greater Yellowstone Coalition reminds the Park Service of a draft report completed by Mary Meagher (1993), which was mentioned in just one sentence in the 1997 environmental assessment. This and subsequent publications by Meagher provide important information on the influence of winter recreation on bison populations and distributions. The use of the groomed roads has led to energy savings, increased populations, expanded range-use areas, and altered distributions. As bison continue to populate lands on the west side of the park, they are slaughtered by the state of Montana. Thus, bison are not responding to natural conditions, but to a landscape manipulated by humans for recreational and commercial livestock purposes. The Park Service, unfortunately, failed in its analysis to provide any documentation about winter road grooming impacts on bison and associated wildlife. If the Park Service is intent on leaving the park's roadways open to motorized vehicles of any kind, the Park Service and other agencies must first implement changes in the current bison management plan, to mitigate the adverse effects of bison leaving the park in winter via the park's roadways.

Scientific Justification for Managing Winter Use

An appendix by James W. Caslick, PhD provides ample evidence for the need to address the current levels of winter use in Yellowstone:

> "My review of the literature leaves me with no doubt that winter recreation activities in Yellowstone have affected wildlife behavior and survival, including bison use of groomed snowmobile trails (Aune 1981), and groomed-trail effects on changes in bison movements, habitat use, distribution and calf survival (Meagher 1993); Yellowstone elk have been affected by cross-country skiers (Aune 1981; Cassirer et al. 1992), and in Yellowstone, snowmobiling or cross-country skiers have caused most trumpeter swans to fly (Shea 1979). (p. A-8)
>
> "In regard to wildlife in Yellowstone, I conclude from my literature review that the most pressing [Visitor Use Management] issue is snowmobiling—not snowmobiling in general, but snowmobiling in and near thermally-affected wildlife habitats that are known to be unique and of critical value to wildlife in winter... From my literature review, I conclude that there is now ample documentation to administratively close these thermally-influenced winter habitats, prohibiting winter use by private and commercial snowmachines, skiers, snowshoers, and bikers. (p. A-10)
>
> "To increase protection of these thermally-influenced wildlife habitats in winter and to interrupt the existing network of groomed trails now known to be used by Yellowstone elk and moose (USDI/NPS 1990) and bison (Aune 1981; Meagher 1993), I therefore recommend that private and commercial snowmachine use be permitted in the park only as follows:
> (1) Mammoth to Indian Creek Campground
> (2) West Entrance to 7-mile Bridge
> (3) South Entrance to Lewis Lake Campground (4) East Entrance to Sylvan Lake (or Sylvan Pass).
> To further reduce impacts on wildlife, over-snow administrative travel on other park roads should be restricted to the middle hours of daylight (i.e., 10 a.m. to 4 p.m.) to avoid wildlife disturbance during their early morning and evening feeding periods. (p. A-10)

Non-motorized use

Our comments focus upon motorized winter use, because it represents the vast majority of winter use in Yellowstone. That said, there is no question that non-motorized winter use may adversely affect the park's wildlife in some areas, and during certain times. We commend the Park Service for its ongoing identification of areas and seasons important to grizzly bears and other wildlife and closing these areas to all human use, and we encourage the Park Service to continue this practice to address non-motorized winter use where it may adversely affect wildlife.

East Entrance Road

We share concerns described by Bozeman resident and avalanche control specialist Don Bachman that: "Yellowstone is the only national park unit conducting avalanche control activities to facilitate snowmobile access" (Letter to NPS by Bachman, dated 11/15/99). Bachman identifies the avalanche control at Sylvan Pass as particularly inappropriate, due to the use of a howitzer to bombard avalanche starting zones. Bachman argues that this intensive management is not justified from purely an economic perspective, and we can only speculate at the potential adverse effects on wintering wildlife, particularly grizzly bears, wolverines, or other forest carnivores that happen to use the area. As Bachman nicely summarizes:

> "The real value of closing this segment of the park to oversnow motorized use (including snowcoaches) would be the return of a large portion of Yellowstone to a near pristine winter process where there would be only an occasional administrative vehicle, and permitted ski and snowshoe expeditions."

Wildlife Concerns

In support of our proposal, we provide a species-by-species account regarding the effects of winter recreation on predators, and specifically grizzly bears, wolves, lynx, wolverines, and their prey.

Grizzly Bears

The primary effects of winter use in Yellowstone on grizzly bears is on the bison that are potential prey for grizzly bears. As mentioned above, bison use the packed trails to leave the park, and under the current management policy many of them are killed at the park border, thus lost to the bears as a potentially important food item. The Winter Use EIS fails to address this problem in its analysis, and its preferred alternative might only exacerbate this problem, since a plowed road would make for an even easier travel corridor than a packed trail, and the implementation of mass transit would result in reduced displacement of bison from the park roads. As mentioned in our opening remarks above, short of closing the park roads to all plows and snow-compacting vehicles entirely, the only way to effectively mitigate for this problem is to reform the bison management plan to allow for free-ranging bison outside of Yellowstone Park.

A secondary effect of winter use in Yellowstone on grizzly bears and their prey is the noise and disturbance of people and machines. The direct effects on grizzly bears are minimal so long as the season of use is limited to when bears are typically secure in their dens, and that use is confined to roadways that are well-separated from these den sites. Yet, effects on bison, elk, and other important grizzly bear prey may be significant. Constraining motorized winter use to mass transit is the best way to minimize the potential disturbance of these wildlife due to winter users.

Wolves

Wolves remain active year-round, and thus winter use has a high potential of adversely affecting wolves. Restricting snowmobiles to the park's roadways has helped to mitigate potential conflicts, but this may not be sufficient. The results of a study about the impacts of winter recreation on wolves has already driven restrictions in Voyager National Park:

> "While the study [in Voyagers National Park] did not prove that winter recreational use harmed wolves, it suggested that the National Park Service should close important wolf foraging areas to winter use until a better understanding of wolf–snowmobile interactions could be determined." (Olliff et al., 1999; p.32)

> "In the late 1980's, park wolf researchers found evidence which suggested snowmobile use in some areas disrupt wolf activity. Specifically, the disruption was not considered significant on a case-by-case basis. Concerns with the cumulative effect of repeated disruptions over a winter season, particularly in times of severe winter weather or nutritional stress as a result of reduced prey availability, however, was thought to be important. Based on research information and consultation with the USFWS in 1992, the park delineated 17 restricted use areas in major lake bays later that year. The park then began to document winter wolf, snowmobile, and other wildlife activity in restricted use areas through an aerial monitoring program." (USDI, 1996)

Predator Conservation Alliance supports banning winter use in ungulate winter ranges, and restricting the season of winter use to eliminate the risk of conflict during the critical denning period for wolves, as recommended in the report referenced in the EIS:

> "New winter recreational developments should not be built near ungulate winter ranges or where they would impede wolf movements between high-quality habitats. Moreover, existing destination areas should be closed by April 1 to prevent the displacement of wolves during critical denning periods... Grooming and use of snowmobile roads and trails should end between March 15 and April 1, allowing wolves to use spring denning sites without harassment. (p.33)

Further, we support restricting motorized winter use to mass transit, to reduce the potential displacement and harassment of wolves themselves that may range in proximity to the park's roads, and the bison and elk that the wolves depend on for their prey.

Lynx

Like wolves, lynx are also active during winter, and the Park Service report referenced in the EIS nicely summarizes potential conflicts posed by winter use, and snowmobiling in particular:

> "Snowmobiling may be particularly adverse to lynx because: (1) this activity occurs when animals are frequently in poor condition due to the stresses of winter (Anderson 1995); (2) this activity may be dispersed on the landscape (i.e., not confined to roads) on national forest lands outside of wilderness areas; (3) it may occur at night when lynx are usually active; (4) it is frequently accompanied by human disturbance and habitat loss associated with recreational infrastructure; and (5) this activity may alter the density and distribution of snowshoe hares, a favored prey item. In Ontario, Canada, snowmobile activity altered the mobility, distribution, and movements of hares (Neuman and Merriam 1972). Road plowing, grooming, and construction activities that support snowmobilers may also significantly reduce the effectiveness of winter lynx habitats. In this regard, road density and the level of automobile use are important considerations because they affect the frequency and intensity of disturbance. (p.56)

An additional concern is that packed trails may allow access into lynx habitat for the its competitors — mountain lions, bobcats, and coyotes — that otherwise would be unable to travel through the deep, soft snow to compete for the lynx's prey (e.g., USDI 1998, pp. 37006, 37008).

Within Yellowstone, these adverse effects are mitigated by the restriction of snowmobiles to roadways, but again that may not be sufficient. To reduce the risk of displacement and harassment during winter to lynx themselves and to their prey, we favor restricting motorized use to mass transit.

Wolverines

Wolverines are known to inhabit Yellowstone Park, and are active year-round, and thus winter recreation must be managed with their needs in mind. Idaho Department of Fish and Game researcher Jeff Copeland has documented the sensitivity of wolverines to people, particularly in their natal denning areas during winter (Copeland, 1996). While this risk is much reduced in Yellowstone by confining use to the park's roadways, some aspects of the current use may adversely affect wolverines, such as the grooming and use of the east entrance road over Sylvan Pass, and the associated avalanche control (see above, "East Entrance Road"). Indirect effects on wolverine due to effects on their prey may be significant as well. Thus, we favor restricting motorized use to mass transit, and closing the east entrance road to all private and commercial motorized use.

Scientific Study

We strongly encourage the Park Service to continue and increase its efforts to generate sound, scientific information on the effects of winter recreation on wildlife. This issue is escalating within national parks and on public and private lands across the country, and managers could benefit from information that Yellowstone may be uniquely situated to provide. We encourage the Park Service to implement closures to all users where needed to generate good information, because we are confident that the long-term value of this information outweighs the short-term political and economic costs of these closures.

Social and Legal Concerns

The National Park Service Organic Act states that the purpose of the National Parks is "to conserve the scenery and the natural and historical objects and the wildlife therein." (16 USC § 1) The National parks were also created for the public's enjoyment, but only "in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations." (Id) Contrary to the requirements of the Organic Act, the use of snowmobiles has placed the enjoyment of snowmobile users over the protection of Yellowstone's scenery and wildlife as well as the enjoyment of other park visitors. In addition to the previously mentioned impacts on wildlife, snowmobile use causes significant noise and air pollution. In fact, levels of carbon monoxide measured between West Yellowstone and Madison junction during 1996 were significantly higher than the highest levels of carbon monoxide measured anywhere in the United States during 1995. When snowmobile use is allowed to the extent that it causes air and noise pollution levels in Yellowstone National Park to exceed the levels in our large urban areas, the park is no longer unimpaired for the enjoyment of future or even present generations.

Yellowstone was set aside for the public to enjoy its unique natural wonders, not to provide a playground for snowmobiles. During the winter, the wildlife and thermal features that inspired the creation of Yellowstone National Park are part of a landscape unmatched anywhere else in the world. The American public should be able to view this spectacle without having to endure the pall of blue smoke and overpowering whine created by snowmobiles. Snowmobilers represent a small percentage of the public, even in the states surrounding the park. Under the park's current management scheme, it is impossible to experience the park during the winter without experiencing the sound and smell of snowmobiles. The park service cannot continue to allow a small minority to dictate the winter experience of Yellowstone for the rest of the public. If the park service truly wants to provide a means for the general public to enjoy the unique winter experience of Yellowstone National Park, the mass transportation alternative will allow the public to visit Yellowstone without the impacts of snowmobiles. The experience of snowmobiling in the park itself might be eliminated, but the public's experience of the scenery and wildlife that Yellowstone was created to protect will be greatly enhanced.

Thank you for preparing an analysis of winter use in Yellowstone, and for the opportunity to comment. Please keep us informed of any developments on this issue.

Sincerely,

David Gaillard, Coordinator
Forest Predator Campaign

Shawn Regnerus, Coordinator
Roads Scholar Campaign

Cc: Kemper McMaster, Mike Long, U.S. Fish and Wildlife Service
Eric Glitzenstein, Attorney
D.J. Schubert, Consultant
Fund for Animals
Greater Yellowstone Coalition
Jackson Hole Conservation Alliance
National Parks Conservation Association

Literature Cited:

Copeland, Jeffrey P. 1996. Biology of the wolverine in central Idaho. Masters thesis, University of Idaho, 138 pp.

Olliff, T., K. Legg, and B. Kaeding, editors. 1999. Effects of winter recreation on wildlife of the Greater Yellowstone Area: a literature review and assessment. Report to the Greater Yellowstone Coordinating Committee, Yellowstone National Park, Wyoming, 315 pp.

U.S.D.I., 1998. Proposal to list the contiguous United States distinct population segment of the Canada Lynx, proposed rule. U.S. Department of Interior, Fish and Wildlife Service, *in* U.S. Federal Register 63(130):36993-37013.

U.S.D.I., October 1996. Restricted winter use report: Voyageurs National Park. U.S. Department of Interior, National Park Service, International Falls, Minnesota, 20 pp.

PREDATOR CONSERVATION ALLIANCE
Page 1. Re: none of the alternatives adequately protects park resources. NPS disagrees. All of the alternatives, to various degrees, protect park resources. Under the CEQ regulations, the requirement in an EIS is to provide a range of reasonable alternatives that clearly define the issues, and to fully evaluate and disclose the possible effects of those alternatives. In our estimation, it is unrealistic to expect all alternatives in an EIS to meet all desired conditions expressed in the purpose and need for action equally well. Such a set of alternatives would likely have no significant differences among them.
Pages 1-2. Re: Support The Citizen's Solution. Expressions of support or objection to specific alternatives or alternative features will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision.
Page 1. Re: Banning all motorized use or building a monorail are the best ways to protect wildlife. See page 37-38 in the DEIS "Alternatives Considered But Eliminated From Detailed Study" for a discussion of these issues.
Page 1. NPS is working to ensure that the Winter Use Plan and the Bison Management EIS/Plan are coordinated and that analyses are parallel and consistent in regard to the effects of winter use on bison.
Page 2. 1) Re: NPS failed to provide documentation about the effects of road grooming on bison and other wildlife. It is not clear to NPS if the commenter is referring to the Winter Use DEIS or the 1997 EA. If it is the former, NPS disagrees: the effects of grooming are discussed on pages 166-169, and in Chapter 4 under each alternative. If it is the latter, it is outside the scope of this project to respond to comments referring to another document, and no response is required. 2) Adverse effects of nonmotorized use. The effects of nonmotorized use are analyzed for each alternative. It will be up to the decision-maker to weigh the available data, evaluate the possible impacts of each alternative, and decide if park resources are impaired. The impacts in question are not on their face indisputable, and it is the function of an EIS to focus the issues by addressing those impacts as well as possible.
Page 3. Re: Against avalanche control. Alternative D proposes to cease avalanche control and close the East Entrance.
Page 3. Re: Effects of winter use on grizzly bears. An analysis of the impacts on grizzlies associated with winter use is contained in the biological assessment and the FEIS will be revised to include this information.
Page 3. Re: Effects of winter use on wolves. An analysis of the impacts on wolves associated with winter use is contained in the biological assessment and the FEIS will be revised to include this information. The new preferred alternative restricts travel in certain ungulate winter ranges, and consequently disturbance to foraging wolves should be decreased over the current management scenario.
Page 4. Re: Citation on the effects of snowmobiles on wolves. NPS is aware of the effects of snowmobiles on wolves. An analysis of the impacts on wolves associated with winter use is contained in the Biological Assessment and the FEIS will be revised to include this information. The new preferred alternative restricts travel in certain ungulate winter ranges, and consequently disturbance to foraging wolves should be decreased over the current management scenario.
Page 4. Re: Effects of packed trails on lynx. An analysis of the impacts on lynx associated with winter use is contained in the biological assessment and the FEIS will be revised to include this information.
Page 4. Re: Effects of humans on wolverines. The FEIS will be revised to include additional information on wolverines and winter recreation.
Page. 5. Re: Effects of East Entrance Road/ Sylvan Pass use on wolverine. The FEIS will be revised to include additional information on wolverines and winter recreation.
Page 5. All of the alternatives contain features that serve to mitigate impacts to wildlife. The preferred alternative, for example, restricts use in important wildlife winter range and proposes adaptive management to continually provide feedback to management on the effects of human use on wildlife. In addition, park policy allows managers to close areas at any time to protect resources.
Page 5. Re: Snowmobiles cause noise. The analysis of sound impacts will be updated in the FEIS. The extent to which motorized sounds affect the experience of visitors will be addressed.

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PREDATOR CONSERVATION ALLIANCE
Page 5. Re: Snowmobiles cause air pollution. Inventories and monitoring data relating to the condition of air quality and air quality related values are presented in the affected environment portion of the DEIS. The evaluation of pollution impacts by alternative is presented in the environmental consequences section of the DEIS. This analysis will be enhanced in the FEIS using results from air quality modeling.
Page 5. Re: Ban snowmobiles. This statement refers to the decision to be made and is among the alternative features available for the decision-maker to choose among.
Page 5. Re: Support mass transit. This statement refers to the decision to be made and is among the alternative features available for the decision-maker to choose among.

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December 15, 1999

BY TELEFAX AND OVERNIGHT MAIL

Mr. Clifford Hawkes
National Park Service
Denver Service Center
12795 West Alameda Parkway
Lakewood, CO 80228

Dear Mr. Hawkes:

On behalf of the nationwide membership of The Fund for Animals and the Biodiversity Legal Foundation (The Fund and BLF), I submit the following comments on the Winter Use Plan Draft Environmental Impact Statement (Draft EIS or DEIS) for Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway (hereafter "the Parks" or YNP, GTNP, JDRMP).

The Fund and BLF are frustrated and disturbed by the blatant inadequacy of the Draft EIS. In entering into the settlement agreement in The Fund for Animals v. Babbitt, CV 97-1126(ES), plaintiffs believed that approximately two years should have been a sufficient amount of time to produce a comprehensive and objective EIS evaluating the significant impacts of winter use in the Parks. Considering the deficiencies in the Draft EIS, either plaintiffs underestimated the ability of the National Park Service (NPS) to produce a quality analysis, or, more likely, the NPS simply failed to uphold its agreement and legal responsibility to produce a comprehensive EIS. The Fund and BLF recognize that the unfortunate and illegal involvement of cooperators complicated this effort, but there remains no legitimate excuse for the preparation of a Draft EIS which fails to comprehensively evaluate the direct, indirect, and cumulative impacts of winter use activities on the environment.

Furthermore, The Fund and BLF assert that the Draft EIS process was flawed because of an inexplicable presumption by the NPS that motorized winter access to the Parks, particularly snowmobiling and snowcoach use, must continue. This presumption or position, which is not supported by NPS statutes, regulations, or policies, permeates the entire Draft EIS. While this

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bias in favor of motorized oversnow vehicle access to the Parks may be consistent with the historical trend of the NPS to favor public access over the preservation of nature (See e.g., Sellars 1997), it is not consistent with federal law, it should no longer be the mantra for the NPS, and it should not influence the future management of YNP, GTNP, JDRMP, or any other unit in the national park system. Indeed, there could be no greater stage for the NPS to reassert its commitment to its original preservation mandate established by Congress then to ban snowmobiling, snowcoach use, and trail grooming in the Parks. A failure to do so is not only illegal, but will ensure that the wildlife, ecology, air and water quality, and the natural quiet of the Parks continue to be impacted and degraded and will prolong the management of our national parks as national playgrounds.

Contrary to the NPS's assertions, there is no dual or conflicting mandate in management of national parks. The principle mission of the NPS, as dictated by Congress over 80 years ago, is to preserve nature as it exists. While the NPS cannot preclude all human use of a park, it has the indisputable authority to control what type of use occurs, when that use occurs, and where that use is authorized as long as the use does not conflict with the NPS's preservation mandate. Snowmobiling, snowcoach use, and trail grooming to facilitate access by these vehicles causes significant adverse environmental impacts. Such impacts indisputably violate the NPS's primary mission and, therefore, must be prohibited. Limiting snowmobile access or permitting only snowcoach access as the NPS and others suggest in various alternatives is not acceptable since such use will continue to cause adverse impacts inconsistent with the NPS primary mission.

The failure or refusal of the NPS to understand or properly interpret its legal mandate has unalterably and permanently damaged the Draft EIS. Whether intentional or not, the failure of the NPS to satisfy or even acknowledge the relevance of its legal mandates to winter use activities, particularly snowmobiling, snowcoach use, and trail grooming, in the Draft EIS renders the document incomplete and meaningless. This failure is particularly egregious considering that NEPA requires, particularly under the circumstances here, that a no-snowmobiling/no-snowcoach use/no-trail grooming alternative would be seriously considered in the Draft EIS and that the NPS would provide an objective and comprehensive evaluation of its legal mandates in regards to winter use in the document.[1] Instead, the NPS considered but rejected an alternative which would have banned snowmobiling, snowcoach operation, and trail grooming claiming that "oversnow motorized use is considered to be within the range of recreation opportunities to be provided," DEIS at 38, and, except for including verbatim references to its legal mandates, failed to comprehensively evaluate those standards in regards to winter use activities. While The Fund and BLF recognize that the NPS was likely under tremendous local, state, and federal political pressure to ensure the continuation of motorized oversnow vehicle access to the Parks, this is no excuse to entirely disregard its own legal mandates. Had the NPS properly and objectively integrated its legal standards into the Draft EIS, it would have had no choice but to offer a preferred alternative proposing to prohibit motorized oversnow vehicle access into the Parks since this is the only alternative which is consistent with NPS mandates.[3]

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[1] This expectation was repeated in the 7/18/98 scoping comments submitted by Schubert & Associates on behalf of The Fund for Animals.

Unlike a normal NEPA case where the evaluation is prepared before the action is initiated, this case is unique in that the action, particularly snowmobiling, was permitted for twenty years before the NPS attempted, albeit inadequately, to comply with NEPA and has continued for ten additional years without any substantive or sufficient NEPA analysis. In approving the settlement, plaintiffs reluctantly agreed to permit winter use activities to continue in the Parks even though, by law, these activities should have been ceased during the analysis. Because of the NPS failure to prepare a comprehensive EIS prior to permitting motorized oversnow vehicle access into the Parks, the NPS now has to seriously consider a no-snowmobiling/no-snowcoach use/no-route grooming alternative since that would represent the status quo if the NPS had originally complied with NEPA. Failing to do so simply compounds and exacerbates illegal decisions made thirty years ago. Because of this unique situation, if there is any delay in completing the final EIS and Record of Decision then, at a minimum, the NPS must terminate snowmobiling, snowcoach use, and trail grooming, at least until a final EIS and ROD are completed. It is not in the interests of The Fund, BLF, or even the NPS, to continue to standby and allow winter use activities, particularly snowmobiling and trail grooming, to exert adverse impacts on the wildlife, air and water quality, ecology, and natural quiet of the Parks while the NPS continues to struggle to properly evaluate the environmental impacts of winter use activities in a legally sufficient NEPA document.

In addition to ignoring its legal mandates in the preparation of the Draft EIS, the document itself does not meet the legal standards required under the National Environmental

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[3] A prohibition on snowmobile use in national parks is not unprecedented. In the late 1970s/early 1980s, for example, officials in Glacier National Park decided to prohibit snowmobiles. At about the same time, limited snowmobile use was permitted and then subsequently withdrawn from California's Yosemite, Sequoia-Kings Canyon, and Lassen Volcanic National Parks. In this case, however, The Fund and BLF believe that a prohibition on snowmobiling, snowcoach use, and trail grooming is the only option available to the NPS which will ensure sufficient protection for the natural features of the Parks as required by law. Prohibiting snowmobiling and trail grooming would also be entirely consistent with the approach federal agencies have taken in recent years to handle similar problems in the national parks. For example, the Departments of Interior and Transportation recently announced plans to curtail the degradation caused by too many cars in certain national parks, such as by announcing that, in order to "preserve and protect" the Grand Canyon "for future generations," the federal government will "greatly restrict automobile use," as well as diesel buses, diesel and steam locomotives and outboard engines on river rafts. 61 Fed. Reg. 69,308 (Dec. 31, 1996). Similarly, the government has recently taken action to curtail the air traffic over Grand Canyon, recognizing that permitting these flights conflicts with the Park Service's duty to "preserve the natural environment." See 62 Fed. Reg. 1795, 1796 (Jan. 13, 1997). All the reasons that support these regulatory initiatives -- air and water pollution, noise abatement, wildlife protection, conflicts with other users, public safety -- fully apply to snowmobile use and trail grooming.

Policy Act (NEPA). In particular: the focus on economic impacts is both unnecessary and misplaced; the analysis of environmental consequences is incomplete and incorrect; the NPS has failed to review a full range of reasonable alternatives; and the evaluation of winter use, particularly snowmobile impacts on threatened and endangered species is insufficient. These and other deficiencies cannot be ignored by the NPS in its haste to finalize this EIS and produce a Record of Decision.

There can be no dispute that snowmobiling and trail grooming cause significant adverse impacts to the natural features and qualities of the Parks. The Draft EIS, though deficient in its analysis, provides or references sufficient evidence to substantiate these impacts. Moreover, the scientific literature provides further support for the inescapable conclusion that snowmobiles and groomed routes adversely impact wildlife, air and water quality, natural quiet, and ecology.[3] The fact that snowmobiles are used in winter, when wildlife are already experiencing stress as a result of the climatic conditions, serves only to exacerbate these impacts. The question then is not whether snowmobiling and trail grooming cause adverse environmental impacts but whether these impacts can be permitted in a national park.

In the remainder of this comment letter, The Fund and BLF will provide indisputable proof that such adverse impacts cannot, by law, be tolerated in the Parks and that, therefore, the NPS is left with no choice but to consider and ultimately prohibit those winter use activities, namely snowmobiling and trail grooming, which cause such impacts. While snowcoach use in and of itself may result in less severe environmental impacts, trail grooming required to facilitate snowcoach access to the Parks will continue to result in adverse and unnatural impacts to the parks' wildlife and, thus, snowcoaches cannot be tolerated in the Parks. In addition, the NEPA deficiencies in the Draft EIS will be identified and evaluated. Finally, The Fund and BLF will describe an independent alternative, the Natural Regulation Alternative, which provides a comprehensive winter use management plan for the parks which is consistent with NPS legal mandates and which offers, if deemed desirable and necessary, a more environmentally friendly alternative to permit public access to the Parks in the winter.

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[3] Much of this literature is summarized in documents in the possession of the NPS including a February 1997 document entitled "Adverse Effects of Trail Grooming and Snowmobile Use on Winter Use Management in the Greater Yellowstone Area with a Special Emphasis on Yellowstone National Park" (Attachment 1), a January 1999 Petition to Prohibit Snowmobiling and Road Grooming in National Parks submitted by the Bluewater Network (Attachment 2), an October 1999 report from the Greater Yellowstone Winter Wildlife Working Group entitled "Effects of Winter Recreation on Wildlife of the Greater Yellowstone Area: A Literature Review and Assessment," and a September 1999 report from the Montana Chapter of The Wildlife Society entitled "Effect of Recreation on Rocky Mountain Wildlife: A Review for Montana" (Attachment 3). As indicated, three of these reports are submitted as attachments to these comments are hereby incorporated in their entirety by reference. While portions of Attachments 1 and 2 are used, practically verbatim, in different sections of this comment letter, The Fund and BLF expect the NPS to consider the entire content of these attachments in its analysis of this comment letter.

Despite the track record of the NPS in regard to the management of snowmobiles, snowcoaches, and trail grooming in YNP, GTNP, JDRMP, and other parks, it is imperative that the NPS substantially alter its course now in order to protect and preserve the integrity and features of the Parks for future generations. National parks are intended, by law and by concept, to be different from other federal land areas like national forests, national wildlife refuges, or lands administered by the Bureau of Land Management. While resource extraction and exploitation are permitted and even promoted on many federal lands, national parks are intended to represent a vignette of primitive America where natural processes are allowed to function and flourish with minimal interference from humans.

While human use of national parks is permitted and, based on visitor statistics, clearly a popular activity, such use is secondary to the mission of preserving nature as it exists and must not come at the expense of the very reasons (i.e., wildlife, geothermal features, historical significance, cultural importance, uniqueness) why these areas were designated as national parks. Unfortunately, in its desire to placate political and business interests, the NPS has ignored its legal mandates and turned the Parks into a cacophony of motorized noise, where wildlife are unnaturally and adversely effected by motorized oversnow vehicle access and where breathing the air can be hazardous to one's health. The Fund and BLF recognize that a decision to prohibit snowmobiling, snowcoach operation, and trail grooming in the Parks will be controversial and precedent-setting. Despite the opposition to such a ban by those more interested in profiting from than protecting the parks, reversing management mistakes begun thirty years ago and instituting a management policy which will protect and preserve the diverse and wonderful features of the parks for future generations is both appropriate and required.

DISCUSSION:

GENERAL COMMENTS ON DRAFT EIS:

As identified above, a fundamental flaw in the Draft EIS and the process used to prepare the EIS is a failure or reluctance by the NPS to recognize, acknowledge, or to properly interpret its existing legal mandates in regard to snowmobiling and route grooming in the Parks. These mandates include the enabling legislation establishing each of the Parks, the NPS Organic Act, regulations implementing the Organic Act, NPS management policies and guidelines, and Executive Orders. Collectively these documents, excluding the park-specific enabling statutes, dictate the management of all national parks. Because the NPS has failed to properly evaluate these mandates in relation to snowmobiling and trail grooming, a summary of the relevant laws, regulations, policies, and other directives is provided below along with an explanation of the applicability of these standards to motorized oversnow vehicle use of the Parks.

Statutes:

YNP was created in 1872 as a "public park or pleasuring-ground for the benefit and enjoyment of the people," 16 U.S.C. §21. While those who support the continuation of motorized oversnow vehicle access to YNP rely on this statement to justify their position, the YNP enabling legislation contains additional guidance relevant to the use of the park. Specifically, Section 2 species that the "public park shall be under the exclusive control of the Secretary of the Interior" who shall publish regulations to "provide for the preservation, from injury or spoilation, of all timber, mineral deposits, natural curiosities, or wonders within said park, and their retention in their natural condition." Id. at §22 (emphasis added).

GTNP was originally established in 1929 and expanded in 1950 "for public benefit and enjoyment," to be administered in "accordance with the general statutes governing national parks." 16 U.S.C. §406d-1. In 1972, JDRMP was established for the purpose of "commemorating the many significant contributions to the cause of conservation in the United States, which have been made by John D. Rockefeller, Jr., and to provide both a symbolic and desirable physical connection between the world's first national park, Yellowstone, and the Grand Teton National Park." PL 92-404. The JDRMP, like the GTNP, is administered according to the NPS Organic Act which, as indicated below, provides clear direction for the management of public use of the Parks. It should be noted, however, that legislation establishing YNP, GTNP, or JDRMP did not explicitly or implicitly mandate that snowmobiling be permitted in the parks, nor did they suggest that the public must be afforded access to the Parks, by any means, during the winter season.

Though YNP was established in 1872, the NPS was not officially created until 1916 when the NPS Organic Act was promulgated. This Act provides the blueprint for the management of national parks. Specifically, the Act directs the NPS to "promote and regulate the use of the Federal areas known as national parks .... by such means and measures as conform to the fundamental purpose of said parks ... which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." 16 U.S.C. §1 (emphasis added). In designating hundreds of national park units since 1916, Congress has repeatedly reaffirmed its intention that, while these areas should be available for appropriate public use, they must be protected from despoliation in order to preserve "nature as it exists." See, H. Rep. No. 700, 64th Cong., 1st Sess 3 (1916)(emphasis added). Thus, as the Secretary of Interior stated in 1925 in a directive to the Director of the Mount McKinley National Park, "the duty imposed upon the National Park Service in the Organic Act creating it to faithfully preserve the parks and monuments for posterity in essentially their natural state is paramount to every other activity." See, National Riffle Ass'n v. Potter, 628 F. Supp. 903, 910 (D.D.C. 1986).[4]

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[4] See also, May 13, 1918 letter from Secretary of the Interior Franklin Lane to Stephen T. Mather, Director of the National Park Service ("Every activity of the Service is subordinate to the duties imposed upon it to faithfully preserve the parks for posterity in essentially their natural state") (Dilsaver 1994).

Thus, while the statute requires the NPS to promote the use of national parks, it specifies that such use must be regulated and must not result in the impairment of the scenery, natural and historic objects, or the wildlife of the parks to the detriment of future generations. Far from authorizing all potential forms of public use, the statute explicitly declares that the NPS must provide for public use "in such manner and by such means" as will leave the parks unimpaired for the enjoyment of future generations. Consequently, if a use, like snowmobiling, results in impairment of the parks then the NPS has the authority and duty to consider and ultimately prohibit such use under the statute.[3]

The term "unimpaired" is not defined in either the statute or regulations. It is, however, defined and interpreted in NPS Management Policies to apply to both physical resources, such as wildlife and geologic features, as well as intangible values, such as scenic vistas and solitude. Policies at 1:3. Whether an action causes an impairment is a management determination. In making this determination, the manager should consider the spatial and temporal extent of the impacts, the resources being impacted, the ability of the resources to adjust to those impacts, the relation of the impacted resources to other park resources, and the cumulative as well as the individual effects (Policies at 1:3). NPS policy specifies that potential impairments must be treated in the same manner as known impairments. Policies at 1:4. Thus, if an action is likely to result in an impairment, the action cannot be implemented until it can be determined that the action will not result in an impairment. The environmental impact of snowmobiles and trail grooming, as conceded in the Draft EIS and as substantiated in the scientific literature (See Attachments 1, 2, and 3) violate the impairment standard and, therefore, cannot be permitted in national parks.

More recently, in 1970 Congress recognized that the park system has "grown to include superlative natural, historic, and recreation areas [which] are united through their inter-related purposes and resources into one national park system as cumulative expressions of a single national heritage [with] superb environmental quality." 16 U.S.C. §1a-1. Given the importance of these areas, in 1982, Congress reaffirmed that they must continue to be "preserved and managed for the benefit and inspiration of all the people of the United States." 16 U.S.C. §1a. Thus, Congress has instructed the NPS that "the authorization of activities (in national parks) shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established ..." 16 U.S.C. §1a-1. The NPS has interpreted these instruction to mean that "Congress conceive[s] of the park system as an integrated whole, wherein hunting, trapping, and any other activities in derogation of park values could be allowed only if authorized by a park area's enabling legislation or other applicable federal law." Michigan United Conservation Clubs v. Lujan, 949 F.2d 202, 205 (6th Cir. 1991) (emphasis added).

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[3] The interpretation of the impairment standard has not been consistent throughout the years (See e.g., Sellars 1997). As a result, the management of YNP and perhaps other national parks between 1916 and the late 1960s included management actions which clearly could not meet the unimpairment standard. In 1963, the publication of the Leopold Report, provided the impetus for the NPS to reexamine and reassert its original preservation mandate. Among the many recommendations in this report was a simple yet far reaching proposal that "the biotic associations within each park be maintained, or where necessary recreated, as nearly as possible in the conditions that prevailed when the area was first visited by the white man" (emphasis added) A national park should, as specified in the Leopold Report, "represent a vignette of primitive America" (emphasis added). In YNP, the Leopold Report resulted in the termination of lethal elk and bison control in the park and established natural factors as the fundamental force in controlling wildlife populations. Unfortunately, the renewed interest in protecting and preserving nature did not influence the NPS decision to permit oversnow vehicle access into the Parks which was done primarily to placate political and local business interests (Yochim 1998).

Based on the statutory evidence, there can be no legitimate dispute that the Park Service has a statutory mandate to adopt rules which "best achieve the Organic Act's mandate," including rules to prohibit snowmobiling and trail grooming if these activities are adversely affecting park resources. National Wildlife Fed. v. National Park Service, 669 F. Supp. 384, 391 (D. Wyo. 1987) (citing cases). In fact, a long line of case law has made it clear that the Park Service must regulate public use of the parks in order to promote preservation objectives. See, e.g., Michigan United Conservation Clubs v. Lujan, 949 F.2d 202 (6th Cir. 1991); Mausolf v. Babbitt, 125 F.3d 661 (8th Cir. 1997); Organized Fishermen of Florida v. Hodel, 775 F.2d 1544 (11th Cir. 1985); National Rifle Ass'n ("NRA") v. Potter, 628 F. Supp. 903 (D.D.C. 1986).

As Congress has explained, "[t]he Secretary has an absolute duty, which is not to be compromised, to fulfill the mandate of the [Organic] Act to take whatever actions and seek whatever relief as will safeguard the units of the National Park System." Senate Rep. No. 528, 95th Cong. 1st Sess. 21 (1977) (emphasis added). Thus, for example, in Potter, the NPS concluded that its long-standing authorization of hunting was inconsistent with the Service's preservation mandate, and prohibited hunting in the parks unless Congress required it. 628 F. Supp at 906. The National Rifle Association ("NRA") challenged this regulatory shift, arguing that each park should be permitted to determine whether to permit hunting. Id. at 907. The NPS in turn argued that its philosophy "has always been exclusively protectionist," and that the amendments to the Organic Act were a "pointed[ ] reminde[r]" to the NPS to pursue that mission. Id. (emphasis added). The court agreed, finding that the Park Service's emphasis on preservation was entirely appropriate and consistent with Congressional intent. Id. at 912; see also Michigan United Conservation Clubs, 949 F.2d at 207 ("Notwithstanding that the goals of user enjoyment and natural preservation may sometimes conflict, the NPS may rationally conclude, in light of the Organic Act and its amendments, that its primary management function . . . is preservation unless Congress has declared otherwise.")

Regulations:

The preservation mandate is also reflected in the regulations promulgated to implement the NPS Organic Act. The original regulations were originally published in 1974 and subsequently amended in 1978 and 1983. In 1974, when the first national standards were promulgated, YNP and perhaps other Parks were permitting motorized oversnow vehicle access without any overarching regulation controlling when or how such use would occur.

To achieve its preservation mandate, NPS regulations prohibit the destruction, injury, or disturbance of living wildlife from its natural state. 36 C.F.R. §2.1(a)(1). More specifically, the "frightening or intentional disturbing of wildlife nesting, breeding or other activities" are prohibited. Id. at §2.2(a)(2).

Snowmobile use in the national parks is prohibited, "except on designated routes and water surfaces that are used by motor vehicles or motorboats during other seasons."[4] 36 C.F.R. §2.18(c). Such routes and water surfaces available for snowmobile use must be identified by special regulations. Id. Even if used on designated routes or water surfaces, snowmobile use is prohibited unless it "is consistent with the park's natural, cultural, scenic and aesthetic values, safety considerations, park management objectives, and will not disturb wildlife or damage park resources." Id. The regulations also establish noise emission and other criteria governing snowmobile use within units of the national park system.

YNP, GTNP, and JDRMP also have park-specific regulations governing snowmobile operation. YNP regulations, which were established several years after snowmobiles were permitted access to the park, limit snowmobiles to designated routes which are defined as "that portion of the roadway located between the road shoulders designated by snow poles or poles, ropes, and signs erected by the superintendent to regulate snowmobile activity" (emphasis added). The routes designated for snowmobile use are located on the majority of the existing road surfaces utilized by automobiles outside of the winter season. The special regulations for GTNP and JDRMP also identify those routes and, in the case of GTNP, the area (formerly) open to snowmobile use but do not, unlike the YNP regulations, define the standards for delineating a designated route.[7]

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[4] A special exemption to this requirement had been issued to GTNP to permit the use of snowmobiles in the potholes area. This use, however, has been unofficially terminated thereby eliminating the need for the exemption. The Continental Divide Snowmobile Trail, however, which occupies the road shoulder within GTNP and JDRMP is technically an off-road trail which should require a similar exemption. Whether such an exemption exists or, if so, whether such an exemption is legal, is unknown. Furthermore, though not disclosed in the Draft EIS, the NPS has never finalized a proposed rule to officially designated the CDST as a snowmobile route in GTNP and JDRMP. Instead, the NPS has relied on illegal annual decision to authorize use of the CDST on an experimental basis. For these reasons the CDST is currently not a legal snowmobile route in GTNP or JDRMP and, therefore, must be closed until the NPS finalizes a rule officially designated the CDST as open to snowmobile use. The NPS must provide a discussion of the history and status of the CDST in a supplemental or Final EIS.

Both the general and park-specific regulations, though promulgated to permit snowmobile use, are, based on their plain language, clearly intended to substantially limit such use to those routes, areas, and circumstances when snowmobile use will not adversely impact park features and resources. Indeed, these regulations establish very rigid and specific standards to govern snowmobile use.

First, snowmobile use, even if on a designated route, is prohibited if it conflicts with the park's natural, cultural, scenic and aesthetic values, if it is unsafe, if it violates park management objectives, or if it disturbs park wildlife or damages park resources. If snowmobile use violates any one of these standards, the use must be stopped or modified so that it does not result in such impacts. Snowmobile use in the Parks, as documented in the Draft EIS, documents referenced in the Draft EIS, and the scientific literature unquestionably exceeds these basic standards and, thus, the elimination of snowmobile use must be considered and ultimately, as required by law, this use must be prohibited.[8]

Second, there is no authority in the general or park-specific regulations to authorize trail or road grooming as a means of delineating the boundaries of a snowmobile trail. While the GTNP and JDRMP are silent on this question, thus providing no guidance on how snowmobile routes can be delineated, the YNP regulations *explicitly limit the methods available for delineating* snowmobile routes to poles, ropes, and signs. Despite this clear limitation, YNP since the late 1960s/early 1970s has groomed snowmobile routes to facilitate snowmobile access. While grooming may simplify snowmobile operation, reduce off-road use, and increase public safety, the practice of grooming results in substantial environmental impacts as discussed in greater detail below, and snowmobile route grooming is not legal.[9] The Draft EIS fails to disclose or discuss why snowmobile routes are groomed in the Parks, the authority for grooming such routes, and the environmental impact of this activity. Grooming has become so ingrained in the winter use management strategy that the NPS apparently does not recognize that it is not a permissible means of delineating snowmobile routes and that it, in conjunction with or independent of snowmobile use, causes significant environmental impacts.

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[7] The GTNP and JDRMP regulations include snowplanes in the definition of snowmobiles. Neither the general or park-specific regulation explicitly permit snowcoach use of the Parks. Thus, either that use is occurring illegally or it is authorized under the general regulation governing the use of motor vehicles on park roads.

[8] Since snowmobile use in the Parks is, except for a few routes in GTNP, inextricably linked to trail grooming and because trail grooming exerts adverse and unnatural impacts on park wildlife and ecology, as long as trail grooming occurs the number of snowmobiles using the Parks is irrelevant. Consequently, any claim that substantially reducing the number of snowmobiles permitted access to the Parks is sufficient to remedy existing impacts, unless such a reduction is commensurate with a termination of trail grooming, is wrong.

[9] If the NPS intended for grooming to be an acceptable method of delineating a snowmobile route it would have explicitly permitted this practice either in its general or park-specific regulations. At present, grooming in YNP is identified only in the annual compendium issued by the park superintendent pursuant to 36 C.F.R. §1.7(b). In such compendiums, the

Policies:

The emphasis on the preservation of nature within the units of the national park system does not end with NPS regulations, but permeates all levels of NPS standards, guidelines, and directives. NPS Management Policies (Policies), for example, provide additional compelling evidence that the preservation of nature is the primary directive of the NPS and that snowmobiling and trail grooming have no place in the national parks. NPS policies originate in law and adherence to policy is mandatory unless waived or modified by an appropriate authority. Policies at ix.

The natural resource policies of the NPS are "aimed at providing the American people with the opportunity to enjoy and benefit from natural environments evolving through natural processes minimally influenced by human actions." Policies at 4:1 (emphasis added). This overarching mandate applies to both natural and development zones, although the latter category includes facilities and other structures to facilitate intensive visitor use which may alter the natural aspect of the land. In natural zones, which represent the bulk of the Parks, "natural resources will be managed with a concern for fundamental ecological processes as well as for individual species and features." Policies at 4:1 (emphasis added). Interference with natural processes in natural zones is not permitted, except under limited circumstances. Policies at 4:2. The NPS is mandated to monitor naturally evolving plant and animal populations, and the human influences on them, to detect any significant unnatural changes. Policies at 4:2.

Since park wildlife, geologic wonders, vegetation, air, and water are not limited to the narrow development zone surrounding roads and structures, any unnatural impacts on these features whether originating from the development or natural zones are not permitted by NPS policy. While the NPS is monitoring, albeit minimally, some of the unnatural effects of motorized oversnow recreation (i.e., snowmobiling, snowcoach operation, trail grooming), it has completely failed to remedy these impacts as required by its policies.

Native animal management must minimize human impacts on natural population dynamics.

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superintendent is authorized only to "compile in writing all the designations, closures, permit requirements and other restrictions imposed under discretionary authority." Id. Authorizing snowmobile route grooming, an activity which causes such substantial environmental impacts, cannot possibly be within the discretionary authority of a superintendent and, therefore, is not permissible under this regulation.

Policies at 4:5.[10] Animal populations must be protected against harvest, removal, destruction, harassment, or harm through human action. Policies at 4:6. The control of native animal populations must rely on natural processes to the greatest extent possible.[11] Policies at 4:6. The control of animal populations, including unnatural concentrations of animals,[12] or individuals within parks is permitted, but only under extremely limited circumstances and only if the human activities which may be causing conflicts or unnatural concentrations cannot be controlled. Policies at 4:6. Yet again, snowmobiling and trail grooming indisputably cause impacts to native animal populations, and population dynamics which are inconsistent with these policies. The NPS is aware of these impacts, as it conceded to many in the Draft EIS, but has failed to take the requisite action to remedy these effects by prohibiting those human activities causing the impact.[13]

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[10] See also, NPS Natural Resource Management Guideline - NPS-77 ("The fundamental objectives of NPS natural resource management...are to manage the natural resources of the National Park System to maintain, restore, and perpetuate their inherent integrity and, when consistent with the foregoing, to provide opportunities for visitors to benefit from and enjoy natural environments which are evolving through natural processes minimally influenced by human action.") (emphasis added). Management must strive to "perpetuate natural ecosystems through maintaining or restoring natural processes to the extent practically feasible." NPS-77 at 2:23. In managing native animal populations, managers "must give primary consideration to the welfare of native animals, but must also provide for public enjoyment" (emphasis added). Natural conditions are defined in the NPS-77 as those conditions which would have existed today in the absence of the effects of European man.

[11] More specifically, bison management in YNP is intended to maintain "a truly wild, free-ranging population subject only to the influences of natural regulatory processes" (1983 Management Plan). This objective is recognized as being unique in the United States, as nearly all other populations of bison, many of which are domesticated, are controlled by hunting or slaughter, and are fenced. The 1995 Resources Management Plan, which represents the natural resource management planning priorities in YNP, reemphasized the role of "natural regulation" in controlling bison population size. Unlike the 1983 Plan which only hinted of the implications of bison use of groomed snowmobile trails, the 1995 Plan explicitly admits that, "whereas in the past, snow depths in the park interior likely restricted bison movements into many areas, the winter grooming of snow roads for oversnow travel has facilitated bison movement into previously unoccupied areas in and outside the park" (emphasis added).

[12] An unnatural concentration of animals is defined as "populations of animals that are greater than those that would be sustained if it were not for human-induced changes in or out of a park. The concentration may be caused by an artificial barrier, by the removal of a significant predator, by the loss of a seasonal habitat, or by a human-induced behavior avoidance of another area on the part of an animal." NPS-77 at 2:20.

[13] NPS Natural Resource Management Guidelines authorize restrictions to be imposed against certain user groups, including snowmobile users, if a negative impact on native wildlife has

NPS policies also mandate the protection of air and water quality. The NPS must seek to restore, maintain, or enhance the quality of all surface and ground waters within the parks consistent with the Clean Water Act (33 U.S.C. 1251 et seq.) and other applicable federal, state, and local laws and regulations. Policies at 4:15. To do this, the NPS must regulate and control activities with high potential for water pollution, minimize the risk of water contamination by managing toxic substances like petroleum products, and control the intensive of use in certain areas and at certain times based on water quality monitoring studies. As disclosed in the Draft EIS, referenced studies, attachments 1, 2, and 3, and below, the emissions generated by snowmobiles pose a substantial impact to water quality and the ecology of aquatic systems.

The NPS is responsible for the protection of air quality under both the 1916 Organic Act, 16 U.S.C. §1 et seq., and the Clean Air Act, 42 U.S.C. 7401 et seq. The CAA requires superintendents to take actions consistent with their affirmative responsibilities to protect air quality related values in class I areas.[14] The CAA also establishes a national goal of preventing any future and remedying any existing man-made visibility impairment in class I areas. Policies at 4:18. NPS Policies specify that the NPS "will seek to perpetuate the best possible air quality in parks because of its critical importance to visitor enjoyment, human health, scenic vistas, and the preservation of natural systems and cultural resources." Policies at 4:17. The NPS is required to be aggressive in safeguarding air quality related values (i.e., vegetation, visibility, water quality, wildlife, historic and prehistoric structures and objects) from adverse impacts of air pollution, Policies at 4:17, and, when in doubt as to the impacts of existing or potential air pollution on park resources, the NPS must "err on the side of protecting air quality and related values for future generations." Policies at 4:17. To achieve air quality objectives, NPS management must include the inventorying of air quality related values, the monitoring and documenting of the condition of air quality and related values, and the evaluation of pollution impacts and causes. Policies at 4:18.[15]

Another form of pollution, noise pollution, is also of significant management concern to the NPS. Its management policies specify that the NPS "will strive to preserve the natural quiet and the natural sounds associated with the physical and biological resources of the parks (for example, the sounds of the wind in the trees or of waves breaking on the shore, the howl of the wolf, or the call of the loon)." Policies at 4:18. Activities which cause excessive or unnecessary

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been identified from that specific source. NPS-77 at 2:31.

[14] Class I areas include all NPS units designated as national parks with more than 6,000 acres and all national wilderness areas with more than 5,000 acres that were in existence on August 7, 1977, and any other area redesignated as class I by the governing state or Native American authority. Policies at 4:18.

[15] In addition, NPS Natural Resource Management Guidelines specify that the NPS must monitor ambient air quality, visibility standards, and biological effects of air pollutants. NPS-77 at 185-188.

unnatural sounds in and adjacent to parks, must be monitored and action must be taken to prevent or minimize unnatural sounds which adversely affect park resources or values or visitors' enjoyment of them. Policies at 4:18. Despite the regulations in place to control snowmobile noise emissions -- regulations which may or may not be effectively enforced -- snowmobiles create substantial amounts of noise which is not only potentially damaging to the snowmobile operator, but which also may adversely impact wildlife and non-motorized park users. Depending on a number of factors, including topography, vegetation structure, wind direction, a non-motorized user who wants to truly experience natural quiet may need to move several miles from the snowmobile routes before the roar of snowmobile engines is no longer discernible. Requiring such efforts to experience natural quiet in a national park is not consistent with the overarching management mandates.

Public use of national parks is encouraged by the NPS in order to meet its statutory mandate of providing for public enjoyment of the parks. As indicated previously, the NPS statutory mandate does not require that all types of public use be permitted. Indeed, NPS policies specify that a recreational activity will not be permitted in a park if it is: 1) inconsistent with the park's enabling legislation or proclamation, or in derogation of the values or purposes for which the park was established; 2) causes unacceptable impacts on visitor enjoyment due to interference or conflict with other visitor use activities; 3) involves the consumptive use of park resources; 4) results in unacceptable impacts on park resources or natural processes; and 5) causes unacceptable levels of danger to the welfare and safety of the public, including participants. Policies at 8:3. More specifically, snowmobile use in national parks is limited to designated routes and frozen water surfaces "only in locations where there will be no significant adverse impacts on the park's natural, cultural, or scenic resources and values and in consideration of other visitor uses."

Clearly, as revealed in the Draft EIS, the scientific literature (See Attachments 1, 2, and 3), snowmobiling and trail grooming to facilitate snowmobile use are not recreational activities which meet the standards specified in NPS Policies. Not only do these uses result in substantial and unacceptable impacts on park resources and natural processes, but they also are inconsistent with NPS statutes and regulations and cause unacceptable impact on non-motorized visitor enjoyment.

Finally, NPS policies recognize that national parks are not islands unto themselves but that they are integral parts of larger regional environments. As a result, the NPS must "work cooperatively with others to anticipate, avoid, and resolve potential conflicts, to protect park resources, and to address mutual interest in the quality of life for community residents, considering economic development as well as resource and environmental protection." Policies at 2:9.

While some may claim that this policy requires the NPS to continue to permit motorized oversnow vehicle access to the Parks to protect the economic viability of the gateway communities, nothing could be further from the truth. While the NPS must be sensitive to the influences and impacts of park management on adjacent landowners, it has no duty to enhance beneficial effects or mitigate adverse effects unless such actions are consistent with its policies and management objectives. Policies at 2:10. In this case, since snowmobiling and trail grooming are antithetical to the preservation mandate contained in NPS statutes, regulations, and policies, it has no duty or responsibility to continue to permit these activities based on development or economic concerns of adjacent landowners. In short, even if a prohibition on snowmobiling, snowcoach operation, and trail grooming resulted in the economic collapse of a business or an entire gateway community -- which it would not -- the NPS is not responsible and has no obligation to continue to permit an otherwise illegal activity which has and will continue to destroy park features and values in order to avert such an impact. Indeed, the duty of the NPS is primarily and fundamentally to protect the Parks, not to protect the interests, economic or otherwise, of those who reside adjacent to the Parks.[16]

Executive Orders:

A final piece of important guidance was provided in 1972, when the President Richard Nixon, recognizing the widespread and increasing use of ORVs on federal lands signed Executive Order (EO) 11644 (37 FR 2877). Executive Order (EO) 11644, issued in 1972, was intended to provide a "unified Federal policy" for the use of off-road recreational vehicles (ORV's), including snowmobiles, on public lands. Executive Order 11644, 37 Fed. Reg. 2877 (1972) reprinted in 42 U.S.C. § 4321. Its purpose was to "establish policies and provide for procedures that will ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands ... and to minimize conflicts among the various uses of those lands." Id. at § 1. As defined in the EO, an ORV means "any motorized vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain..." Id. at § 2(3).

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[16] Many other NPS documents, including documents specific to YNP, GTNP, and JDRMP (i.e., Resource Management Plans, Master Plans, Statements for Management) provide additional information documenting and emphasizing the preservation mandate of the NPS. For example, this intent is reflected in a number of YNP management guidance documents (i.e. YNP Master Plan (1973) and Environmental Assessment (1974) and the 1983 and 1995 Resources Management Plans). These documents all restate the same general management theme which is to "perpetuate the natural ecosystems within the park in as near pristine conditions as possible for their inspirational, educational, cultural, and scientific values for this and future generations, with minimal disturbance by man's activities." (emphasis added) Furthermore, the Master Plan EA specifies that "all planning for public use of national parks must give priority to the preservation and maintenance of the natural values for which each park was established." (emphasis added). This information, in combination with the statutes, regulations, policies, guidelines, and other directives provide compelling evidence that snowmobiling, snowcoach use, and road grooming are not appropriate activities in the Parks or any national park because of their substantial adverse impacts on the environment.

To accomplish these goals, the EO directs agency officials to specify, through regulation, the areas and routes on public lands on which ORV use will be permitted. Those areas where ORV use is permitted will be based on, among other things, "the protection of the resources of the public lands," id. at § 3(a), and shall "be located to minimize harassment of wildlife or significant disruption of wildlife habitats." Id. at § 3(a)(2). Within National Parks, such routes shall only be designated "if the respective agency head determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, or scenic values." Id. at § (4). The EO also requires agencies to establish a mechanism to monitor ORV use and impacts and to respond appropriately to such information. Id. at § 8.

In response to this Order, in May 1974, the NPS designated the specific routes in YNP upon which snowmobile use was permitted (39 Fed Reg 16151). The designated routes, the selection of which was allegedly "guided by the criteria in sections 3 and 4 of EO 11644," Id., consisted of nearly all of the unplowed roadways.

In 1977, EO 11644 was amended by EO 11989. The amendment authorized "the respective agency head..., whenever he determines that the use of off-road vehicles will cause or is causing considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat..., (to) immediately close such areas or trails to the type of off-road vehicle causing such effects, until ... such adverse effects have been eliminated and ... measures have been implemented to prevent future recurrence." Executive Order 11989, 42 Fed. Reg. 26959 (1977) reprinted in 42 U.S.C. § 4321 (emphasis added). This closure authority must be invoked when the agency head has determined that ORV use may or will cause adverse environmental impacts.

In response to EO 11989, a 1978 EIS examining off-road vehicle use on public lands, and a subsequent DOI Memorandum on ORV management and use, the NPS revised its snowmobile regulations (44 Fed Reg 47412). In an abrupt and complete reversal of its previous reliance on EO 11644 in designating snowmobile routes, the NPS declared that the restrictions of EO 11644 do not apply to the vast majority of snowmobile use in National Parks. The NPS accomplished this result simply by re-defining most snowmobile use as not entailing ORV use. Specifically, the revised regulation states that:

> Off-road vehicle use is not regarded as an appropriate use in the National Park System. Therefore snowmobiles will generally be permitted to operate on those established roads and on frozen water ways where other motor powered vehicles are allowed at other times. In those very limited places where off-road use of snowmobiles is permitted through Special Regulation, the provisions of Executive Order 11644 and 11989 will be enforced.

The rule provides no further explanation or "reasoned analysis"[17] for declaring that EO

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[17] See Motor Vehicle Manufacturers Association of the United States, Inc. v. State Farm Mutual Automobile Insurance Company, 463 US 29, 77 L Ed 2d 443, 103 S Ct 2856 (1983) ("An agency's view of what is in the public interest may change, either with or without a change in

11644 was not applicable to snowmobile use and management in National Parks except under the rare circumstance where snowmobile use is permitted through special regulations to be used off the established roadway.[18]

Clearly, this new interpretation was designed to avoid compliance with the monitoring and mandatory closure provisions of EO 11644, as amended, by arbitrarily determining that snowmobiles are not ORVs when used on established roadways covered with snow. This is an inaccurate interpretation of the definition of an off-road vehicle in the EO. Contrary to the NPS interpretation, the definition of ORV in the EO is not intended to apply to where the vehicle is used (i.e., on or off of an established roadway) but, rather, simply refers to a "category of vehicle capable of cross-country travel on or immediately over land...snow...or other natural terrain..." Id. at § 2(3) (emphasis added). This definition clearly applies to snowmobiles in the National Parks.

In yet another reversal of its interpretation of the applicability of EO 11644, as amended, to snowmobile use in the Parks, the NPS now appears to believe, as it should, that the EO is applicable to snowmobile recreation in the Parks. Draft EIS at vii. Specifically, in summarizing the preferred alternative, the NPS states that "using the criteria stated within Executive Order 11644 (as amended) and its implementing regulation (36 CFR 2.18), monitoring results demonstrating disturbance to wildlife or damage to park resources would be cause to implement actions for mitigating these conditions (for example, closure to winter use or trail restriction)." While the apparent NPS decision to reapply EO 11644, as amended, to snowmobile recreation in the Parks corrects a mistaken interpretation made many years ago, it also raises the question as to whether snowmobiling in national parks is consistent with this Presidential directive.

Unlike many Executive Orders which simply represent an administration's desire or preference and is not legally binding, EO 11644, as amended, has been held to be legally binding on the NPS. See Conservation Law Foundation of New England, Inc. v. Clark, 590 F.Supp 1467 (1984). In addition, the NPS has promulgated a regulation, 36 C.F.R. §2.18, implementing the intent of the EO. NPS Policies indicate that off-road vehicle use (which by definition in the EO includes snowmobiles) on units of the national park system is governed by EO 11644, as amended. Policies at 8:4. More specifically, "within the national park system, routes and areas may be designated for off-road motor vehicle use only by special regulation and only is national preserves, national seashores, national lakeshores, and national recreation areas." Policies at 8:4. A separate provision authorizes the designation of snowmobile routes within the national park system but does not explicitly limit such use to national preserves, lakeshores, or recreation areas. Policies at 8:5. If, as NPS Policies indicated, EO 11644, as amended, applies to both off-road vehicle and snowmobile use in the national park system and if, as is the case, EO 11644 includes

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circumstances. But an agency changing its course must supply a reasoned analysis...)."

[18] In response to a January 1996 FOIA request on this and other subjects, the NPS provided no records relating to its change in interpretation of the applicability of EO 11644 to snowmobile use in National Parks.

snowmobiles in its definition of off-road vehicles, then it would not appear that the NPS has authority under the EO or its own policies to designate routes open to snowmobile use within national parks, like YNP and GTNP. If the NPS has an alternative interpretation of this apparent conflict it must disclose and discuss this matter in the final EIS.

Based on the foregoing analysis of the NPS legal mandates and considering the adverse environmental impact associated with snowmobiling and trail grooming in the Parks, the elimination of these activities from the Parks must be subject to analysis and, ultimately, prohibited if the NPS intends to comply with the law. There is no wiggle room or alternative means of permitting motorized oversnow vehicle access to the Parks -- if it causes adverse environmental impacts -- without violating federal law. Snowmobiles, as documented in the Draft EIS, associated reports, and the scientific literature cause adverse impacts to wildlife, air and water quality, non-motorized users, natural quiet, and to the ecology of the Parks. While snowcoach operation alone may substantially reduce the pollution and noise impacts associated with snowmobile use, the presence of groomed routes to facilitate snowcoach and snowmobile use of the Parks will continue to exert an unnatural influence on wildlife populations thereby impacting wildlife population dynamics, movements, distribution, and habitat use patterns to the detriment of important and unique habitats like the geothermal areas which are so unique to YNP.

SPECIFIC COMMENTS ON DRAFT EIS:

As the foregoing evidence indisputably demonstrates, snowmobiling, snowcoach operation, and trail grooming result in environmental impacts which make these activities inconsistent with NPS statutes, regulations, policies, and other guidance. This evidence, in and of itself, should be adequate to end this debate and to conclude these comments. Unfortunately, though this legal perspective is clearly obvious to any unbiased observer, the fact that the NPS has not already prohibited motorized oversnow vehicle access to the Parks and its failure to even acknowledge the illegality of such use in the Draft EIS or to seriously consider a prohibition on these activities indicate that there are political, economic, historic, or other factors influencing the NPS decision-making process in this matter. The remainder of these comments, therefore, focus on the content of the Draft EIS and will demonstrate the significant deficiencies contained in the analysis. It must be noted, however, that this analysis is provided solely to identify inadequacies in the Draft EIS and does not constitute support for the process used to develop the Draft EIS.

1. The involvement of cooperating agencies in the Draft EIS was illegal and has inappropriately influenced the content and analysis in the Draft EIS:

This is not a new concern. From the very beginning of the Draft EIS process shortly after the settlement agreement was finalized, certain politicians in collusion with the Council on Environmental Quality (CEQ) compelled the NPS to accept cooperators in the Draft EIS process. The cooperators were not limited to the states (WY, ID, MT) but also eventually included several counties surrounding the Parks. While The Fund and BLF recognize that the CEQ made some very unfortunate decisions, at least in part due to political pressure, which created the cooperator fiasco, the NPS and DOI remain at fault for not more aggressively opposing the involvement of cooperators in this process. Furthermore, the NPS has never documented the alleged special expertise of the cooperators and it has inappropriately allowed the cooperators to participate in portions of the Draft EIS process which should have been limited to only NPS involvement.

NEPA defines a "cooperating agency" as a any federal, state, or local agencies which "has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal ... for legislation or other major Federal action significantly affecting the quality of the human environment." 40 C.F.R. §1508.5. In this case, none of the cooperators have any jurisdiction by law over winter use in the Parks. Thus, as clearly intended by the regulation, the expertise of the cooperators must involve the environmental impacts of an action. Alleged economic expertise should not qualify a state or local agency as a cooperator. Yet, this is precisely what has happened as the alleged expertise of the majority of the cooperators is limited to economics.

Even if an expertise in economics qualified a state or local agency to be a cooperator, that expertise would have to be linked to the economics of winter use activities in the parks. As explained in greater detail below, the Draft EIS places an unnecessary emphasis on the economic impacts of winter use in the Parks on the state, regional, and gateway community economies when there is nothing in NEPA which mandates such analysis. The analysis of the economic impacts of winter use management of the Parks, is supposed to be limited to the Parks. The fact that a potential change in winter use management inside the Parks may alter the economies (either adversely or beneficially) of communities outside the Parks is largely irrelevant and certainly should not be a focus -- as it is -- of the analysis in the Draft EIS. If the impact of the federal action on the economies of states and communities is not a required or critical part of the analysis then expertise in what is an irrelevant area of analysis cannot qualify a state or local agency as a cooperator.

The NPS did not need the cooperators to prepare the Draft EIS. Indeed, if anything, the involvement of the cooperators has reduced the quality and comprehensiveness of the analysis in the Draft EIS. If the cooperators had not been involved, the NPS still could have requested information from them for use in the Draft EIS and the state and local agencies could have participated, like everyone else, in the decision-making process during the present public comment period.

The adverse consequences of involving the states and counties as cooperators in the Draft EIS process is most evident in the development of alternatives. First, it is not at all clear why the cooperating agencies were involved in exercises to develop alternatives when this process had nothing to do with the alleged expertise of the cooperators. Developing alternatives, as required by NEPA, is a matter of identifying a reasonable range of options which presumably are consistent with law and which will not cause impairment. Economics have nothing to do with developing the content of different alternatives and are only relevant when the environmental consequences of each alternative is evaluated.

In this case, however, the state and county cooperators played a significant role in creating an assortment of alternatives from which the NPS developed the alternatives offered in the *Draft EIS*. Not surprisingly, given the interests of the state and county cooperators in ensuring that motorized oversnow vehicle access to the Parks continued, they failed to develop a single alternative which prohibited or even significantly reduced snowmobile use in the Parks -- the only option that is consistent with federal law (See Transcript of Cooperators' Alternatives Workshop, October 14-16, 1998). In response, the NPS offered seven alternatives in the Draft EIS, six of which continue to permit snowmobile access to the Parks and not a single alternative which prohibits motorized oversnow vehicle use of the Parks. The no-snowmobiling alternative was, as described in greater detail below, considered but rejected because "oversnow motorized use is considered to be within the range of recreation opportunities to be provided" and since "total elimination of oversnow motorized use without analysis would not be within the scope of the purpose and need for action." DEIS at 38.

Given the historical tendency of the NPS to favor public use over environmental protection in the Parks, it is not known whether the NPS would have developed a different set of alternatives, including a no-snowmobiling alternative, had the cooperators not been involved in the alternative formulation process. Their illegal and unnecessary involvement in developing potential alternatives, however, clearly influenced NPS decisions. The damage to the Draft EIS process caused by the involvement of the cooperators has been done and cannot be reversed. To mitigate for this damage, the NPS must complete the EIS process on its own terms without any involvement of the cooperators or their political supporters and develop a winter use alternative which is consistent with federal law and which protects and preserves the Parks and their natural features in perpetuity for the benefit of current and future generations. Continued involvement of cooperators in the process will only result in damage to the analysis and an end product of dubious value and legality.

2. The analysis of economic impacts in the Draft EIS is unnecessary and misplaced:

The NPS goes out of its way to consider the economic impacts of winter use management on the three-state (MT, ID, WY) economy, the economy of the Greater Yellowstone Area, and of the gateway communities. Remarkably, although NEPA is primarily devoted to identifying and analyzing the environmental impacts of an agency's action, the economic impact of alternative winter use management strategies is not only the very first impact discussed under each alternative but the importance of this impact is clearly elevated over other impacts, including the impacts to the wildlife, identified in the Draft EIS. This emphasis on the economic impacts of winter use beyond the borders of the Parks is unnecessary and misplaced.

First, the NPS is not responsible for the economic viability of the states of MT, ID, WY, the GYA, or the gateway communities. If any of these entities have pursued irresponsible development based on a presumption that visitor access to the Parks would continue indefinitely without change, any economic loss associated with a change in visitor access policy is the fault of the community and city leaders, planners, and private investors, not the NPS. The gateway communities and the states of ID, WY, and MT have and continue to economically benefit from the popularity of the Parks and should be understanding, not obstructive, if the NPS determines that visitor access practices, like snowmobiling, must be terminated in order to protect the features and integrity of the Parks over the long-term.

Second, the primary thrust of NEPA is to evaluate the environmental impacts of federal actions. While the *definition* of impact or effect under NEPA includes reference to economics, this impact must be subservient to ecological *impacts* of the action. If federal agencies were required to emphasize the economic impacts of their actions on communities, regions, and entire states over the environmental effects of agency action, surely such direction would have been clearly elucidated in NEPA or in regulations implementing NEPA. This is not the case. Indeed, there is not a single definition or other provision in the Council on Environmental Quality's NEPA implementing regulations which suggests that such an emphasis is appropriate or that the economic impacts of agency action on lands beyond the agency's responsibility or jurisdiction must be considered. If such a focus were required and if it resulted in decisions which favor economic needs over the protection of the environment, the intent of NEPA to protect and enhance the quality of the human environment would be seriously compromised, if not negated. While it has been claimed that NEPA *does* not require federal agencies to make decisions which are beneficial to the environment, the plain language of the CEQ regulations specify that "the NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment." 40 C.F.R. §1500.1(c) (emphasis added).

Third, the economic analysis must be linked and limited to the ecological and economic effects where the action occurs. In this case, the potential alteration of winter use policies is limited to the Parks. The Draft EIS contains no proposal which affects or alters the ability of individuals to snowmobile, operate snowcoaches, or groom snowmobile routes on private, state, or federal lands outside of the Parks. The emphasis of the economic impact analysis, therefore, must be limited to the Parks and how potential changes in winter use strategies will affect the economics of the Parks. While this analysis must include an assessment of how different winter use alternatives would impact park-specific economics (i.e., entrance fees, costs of grooming/plowing, costs of winter staffing of warming huts and other visitor facilities, costs of ranger patrols, costs of search and rescue/medical emergencies, costs of road repair due to damage caused by grooming, costs of acquiring, maintaining, and operating NPS snowmobiles/snowcoaches/trail grooming equipment), costs which have not been sufficiently disclosed or evaluated in the Draft EIS, it also must include an assessment of the environmental costs associated with winter use. This category of cost is more difficult to define but it is equally, if not more important, in assessing the totality of the economic impacts of the action.

There is, for example, an economic cost associated with the pollution generated by snowmobiles and its impact on air quality, water quality, vegetation, ecology, and the visitor experience. This cost must be calculated using appropriate and legitimate economic models or tools and must be disclosed as a cost of snowmobiling in the Parks. Similarly, the economic costs of the harassment or disturbance to wildlife associated with winter use activities, particularly snowmobiling, must also be calculated and disclosed. Such disturbance may make wildlife more skittish and less observable both in the winter and in other seasons or it could adversely impact the health and productivity of individual animals or affected population impairing survival and long-term viability. Bison use of the groomed snowmobile route system in YNP which may facilitate emigration from the park where the bison may be killed also carries with it an economic cost which must be evaluated as part of the overall economic impact of winter use. In addition, the economic cost of road damage caused by the grooming of the snowpack and the removal of the packed snow in the spring must be considered. This cost, however, is not limited to the cost of repairing the damaged roads, but also include the economic costs associated with the negative impacts on visitors who use these damaged roads and experience road renovation delays during the spring, summer, and fall seasons. These are just a few examples of the many environmental impacts whose economic costs must be calculated and considered. Other examples include the impact of motorized oversnow vehicle access on natural quiet, the economic cost of air and water pollution caused by snowmobile emissions, and the public health costs associated with illness or injury caused by or associated with snowmobile use.

Contingent valuation, which is an economic tool endorsed and used by the federal government to assess the economic costs in natural resource damage incidents and which was used to calculate the non-market value of winter visitation, a cleaner and "greener" snowmobile, and of plowing the road from West Yellowstone to Old Faithful in the Parks, provides a legitimate means of assessing such costs. Surveys should be developed and implemented to determine how much people, including those who have or will visit the Parks and those who may never visit the Parks, would be willing to pay to experience or know that the air and water of the Parks is clean, the value of undisturbed park wildlife, the value of a free-ranging bison, and the value of solitude, serenity, and natural quiet in the Parks. While survey content and methodologies are not flawless, if the survey was constructed and implemented properly, the NPS should be able to obtain some indication of the value of clean air and water, undisturbed wildlife, free-ranging bison, and natural quiet to the public.

Even if the current scope of the economic analysis in the Draft EIS were appropriate, the content of the analysis remains deficient. Except for reference to the non-market value of a visit to the Parks, of renting a "greener" snowmobile, and of plowing the road from West Yellowstone to Old Faithful, the economic analysis only considers one side of the economic equation. As indicated above, there is a variety of costs associated with snowmobile use and road grooming which have not been estimated or incorporated into the analysis. It is entirely inappropriate for the NPS to consider the economic impacts of the different management alternatives on the gateway communities without considering the economic implications to the Parks and their features, resources, and values of continuing to permit motorized oversnow vehicle access. The totality of the economic cost of snowmobiling, snowcoach use, and road grooming, including the cost of adverse impacts to the Parks, wildlife, air and water quality, visitor experience, and natural quiet, must be considered for the economic analysis to be complete.

3. The process used to formulate alternatives in the Draft EIS has resulted in a set of inadequate alternatives which do not encompass a reasonable range of options in violation of NEPA:

According to the Draft EIS, the alternatives subject to serious consideration were created in response to the major issues and concerns raised through the public and internal scoping processes (DEIS at vii). While it is not articulated anywhere in the Draft EIS, the alleged major issues and concerns appear to include visitor use and access, visitor experience, air quality, snowmobile sound or natural quiet, human health and safety, economics, and natural resources (DEIS at 158). In order to be considered as part of an alternative, each potential winter use concept generated through scoping or in NPS and cooperator meetings was evaluated in terms of its responsiveness to the major issues and concerns, the decision to be made, the purpose and need for the winter use plan, and its adherence to current law, park management guidelines, and NPS mandates and policies (DEIS at vii). This process is fundamentally flawed and has resulted in the evaluation of alternatives which, without exception, are illegal, inappropriate, and which will not remedy the substantial adverse impacts of winter recreation, particularly snowmobiling, snowcoach use, and trail grooming on the environment.

First, several of the major issues and concern topics are based on a presumption that motorized oversnow vehicle access to the Parks is required by some unknown and unidentified authority. The categories themselves are not inadequate as there are issues associated with visitor use and access and visitor experience which can be accommodated without violating federal and NPS standards. For example, cross-country skiing if done in a manner and in an area where disturbance or harassment of wildlife can be prevented, is permissible under the existing legal framework. The NPS, however, has apparently interpreted the visitor use and access and the visitor experience categories to pertain to motorized oversnow vehicle access when such access, considering its environmental impacts, is in conflict with NPS mandates. Similarly, the NPS has emphasized the economics of winter access, particularly snowmobile access to the Parks, in interpreting and addressing the economics category.

The identified major issues and concerns may accurately reflect the results of scoping and various meetings. The emphasis on snowmobiles in evaluating these topics may also be in line with the public's, cooperators', and NPS's concerns. However, if the issues and concerns, or the emphasis placed on these topics, are not consistent with federal law and NPS regulations and policies, then either the topics or the emphasis must be changed.

Second, though the winter use management concepts were evaluated in terms of the decision to be made, nowhere in the Draft EIS does the NPS define what that decision is. Presumably, the decision to be made relates to winter use management in the Parks, yet the details of the decision are not identified anywhere in the Draft EIS. If the NPS bases the formulation of alternative winter use management strategies on one or more decisions relevant to winter use management, then surely it must disclose what those decisions are.

Third, the purpose and need for the Draft EIS and its analysis of winter recreation issues is, as stated in the DEIS, based on the differences between desired conditions and existing conditions. The Draft EIS identifies seven desired conditions, including:

- Visitors have a range of quality winter experiences and settings from primitive to developed;
- Recreation experiences are offered in an appropriate setting: they do not take place where they will adversely impact sensitive natural resources, air quality, wildlife, cultural areas, or the experiences of other park visitors;
- Winter recreation complements the unique aspects of each landscape within the ecosystem;
- High quality facilities are provided in parks to support the need for safety and enhanced visitor experiences;
- Conflicts among user groups are minimal;
- Visitors know how to participate safely in winter use activities without damaging resources;
- Snowmobile sound and emission levels are reduced to protect employee and public health and safety, enhance visitor experience, and protection of natural resources.

The NPS provides no indication as to who developed these desired conditions or how they were developed. Though snowmobile recreation is not referenced in six of the seven conditions, it is clear from the analysis in the Draft EIS that the NPS believes that motorized oversnow vehicle access to the Parks is essential if the desired future conditions will be satisfied.[19] This presumption or position, as previously stated, is not consistent with federal and NPS statutes, regulations, policies, guidances, and other directives. Thus, at a minimum, the NPS must disclose the origins of these desired future conditions and must reevaluate them in regards to those types of winter recreation opportunities which can be permitted and which are consistent with legal standards. Remarkably, even if these conditions were properly linked to snowmobile use, the second condition, considering the adverse environmental impacts associated with snowmobile use, should effectively prohibit such use anywhere in the Parks. The NPS must have entirely ignored this condition in evaluating the management concepts which were used to formulate the alternatives.

Fourth, it is inconceivable that the NPS subjected the management concepts resulting from scoping to review under NPS statutes, regulations, policies, and other guidance. If it had done so, then the alternatives evaluated in the Draft EIS would have been entirely different since snowmobiling, snowcoach use, and trail grooming would have been determined to be inconsistent with NPS legal mandates. As requested in the past and in these comments, if the NPS believes that motorized oversnow vehicle access to the Parks and road grooming, considering the environmental impacts which are conceded by the NPS, is authorized under NPS legal mandates it must provide a comprehensive explanation for this determination.

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[19] The seventh desired future condition which does reference snowmobiling is particularly troubling because the inclusion of this condition suggest that the NPS is attempting to avoid seriously considering a no-motorized oversnow vehicle access alternative. Conveniently, by including this condition the NPS can automatically claim that any alternative which prohibits oversnow motorized vehicle access does not satisfy the purpose and need criteria.

As a result of this flawed process, the NPS developed seven alternatives, none of which is acceptable or consistent with NPS legal mandates. Each of the alternatives, except for Alternative G, continues to permit snowmobile use of the Parks to varying degrees. Alternative F, which would close the west side of YNP to snowmobiles, snowcoaches, and trail grooming is the only alternative which even remotely begins to appropriately address the adverse impacts of motorized oversnow recreation in a manner which is consistent with NPS legal standards. This alternative, however, continues to permit snowmobiling, snowcoach use, and trail grooming on several routes within YNP which will ensure and prolong continued adverse environmental impact to the natural features and resources in the Parks. In GTNP and JDRMP this alternative eliminates the Continental Divide Snowmobile Trail and significantly restricts motorized oversnow vehicle access in these parks to the benefit of Park wildlife, ecology, and other features and values.

The preferred alternative (Alternative B) continues to permit snowmobiling, snowcoach use, and trail grooming throughout the Parks. The most significant change imposed by this alternative is a proposal to plow the road between West Yellowstone and Old Faithful to permit access by wheeled vehicles. While this alternative was intended to increase the accessibility of YNP to a larger number of people, its environmental impacts are so severe -- as conceded by the NPS -- that it should never have been considered as a legitimate alternative, much less the preferred alternative. Not only would this alternative drastically and adversely impact wildlife, but it could potentially double the number of visitors entering YNP from the west entrance. More visitors, regardless of their mode of access, corresponds to greater impacts on the land and wildlife. During the winter season, when wildlife are already stressed as a result of climatic conditions, increasing public use of YNP is antithetical to responsible wildlife conservation and preservation. Other alternatives which increase public use, including motorized oversnow vehicle use of the Parks, like Alternatives C and D, suffer from similar deficiencies.

Alternative B also proposes to establish advisory committees to address snowmobile noise and emission issues. While the NPS may desire to avoid the need for any substantive decisions as a result of this EIS process by establishing advisory committee and by continuing scientific, such delays are not acceptable and not consistent with NEPA. The EIS is not intended to be a road map for endless research and delayed decision-making. Rather, it was expected and it is required by law that the EIS process result in explicit management direction for winter use activities in the Parks.[29] A failure to make such decisions represents a violation of NEPA.

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[29] In addition, the statement by the NPS that it will not implement the decision made in the ROD for a year is also unacceptable and in violation of NEPA. Once the ROD is issued the management direction contained in the ROD must be implemented without delay. NEPA provides no allowance for an agency to arbitrarily delay the implementation of its ROD regardless

Alternative E, which is best described as the adaptive management alternative, does not call for any immediate changes in motorized oversnow vehicle access to the Parks. Changes to such use would only come when justified by "scientific study." Linking changes in motorized use of the Parks to future scientific study is likely to ensure the indefinite continuation of such uses without substantive change. While The Fund and BLF do not object to continued scientific study, basing management changes on absolutely conclusive scientific evidence is doomed to failure. Regardless of the legitimacy or comprehensiveness of a study, there will always be experts who will critique the study in favor of one interest or another. As a result, the NPS, in response to political pressure or its own internal inertia to favor public use over park preservation, will always be able to avoid any difficult or substantive change in motorized oversnow vehicle use because of the scientific conflict in interpreting research results.

Furthermore, this alternative should be rejected immediately because it serves only to delay the inevitable changes in motorized oversnow vehicle access to the Parks. Additional study is not necessary to understand that snowmobiling, snowcoach use, and trail grooming substantially and adversely impact park wildlife, ecology, air and water quality, non-motorized users, and natural quiet. Indeed, the Draft EIS concedes many of these impacts raising questions about why any additional study is necessary to document what is already known. The NPS must not fall into the trap of studying an issue indefinitely without making substantive changes based on existing evidence. Such an approach is not consistent with the legal standards that the NPS is required to meet in order to protect and preserve the natural features and resources of the Parks.

Neither The Fund nor BLF are opposed to conducting scientific studies before making management decisions. However, the only context in which this scenario is sensible is if the action has not already been initiated. Conducting studies after an action has been initiated in order to determine the environmental impacts of that action is non-sensical.

In the context of this issue, continuing to permit motorized oversnow vehicle access to the Parks pending scientific study which demonstrate one or more impacts is not appropriate and the burden of proof is misplaced. Technically, such access should not even be permitted because the NPS has never adequately complied with NEPA. By imposing a scientific study trigger for management changes while continuing to permit use, management changes will not occur unless there is demonstrable evidence that motorized oversnow vehicle use adversely impacts park features and resources. Though this evidence already indisputably exists, the evidentiary burden established by this approach is very different than closing the Parks to motorized oversnow vehicle access and only permitting such use if demonstrable evidence exists that such use does not cause adverse impacts.

Finally, Alternative G is the only alternative that prohibits snowmobile use of the Parks. Unfortunately, due to its baseless presumption that some form of motorized oversnow vehicle access to the Parks is required, this alternative continues to authorize snowcoach use of the Parks.

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of the alleged reasons or need for such a delay

To facilitate efficient and safe access to the Parks by snowcoaches, the snow-covered road surfaces have to be groomed. Grooming, as explained above and below, results in substantial impacts to wildlife and other park features which have not been adequately evaluated or, in some cases, even disclosed in the Draft EIS.

None of the alternatives evaluated in the Draft EIS are reasonable.[21] NEPA requires federal agencies to consider a reasonable range of alternatives in any EIS. 40 C.F.R. §1500.2(e). Remarkably, the one alternative that is reasonable – a ban on snowmobiles – was considered and rejected in the Draft EIS because "oversnow motorized use is considered to be within the range of recreation opportunities to be provided" and since "total elimination of oversnow motorized use without analysis would not be within the scope of the purpose and need for action." Draft EIS at 38. These excuses for not evaluating this alternative simply don't make sense.

First, there is no explanation in the Draft EIS as to why motorized oversnow vehicle use is within the range of recreation opportunities in the Parks. There is, as previously stated, no legal basis for this statement so it is unclear why the NPS believes that this is the case. If there is evidence to support this statement it must be provided and the public must have an opportunity to evaluate, research, and comment on this evidence.

Second, as explained above, the desired future conditions which allegedly substantiate the purpose and need for the Draft EIS and for a winter use management plan have not been independently justified, their origins are unknown, and they are not consistent with NPS legal mandates. Because of the desired future conditions that the NPS decided to use to define potential alternatives it has, perhaps intentionally, ensured that a no-snowmobiling alternative would not satisfy the conditions thereby justifying its rejection. If the NPS had defined the purpose and need for the plan and Draft EIS in a manner which was consistent with its legal mandate, then a no-snowmobiling alternative would have been required to be seriously considered as an alternative.

Third, the argument that a no-snowmobiling alternative can be rejected from serious consideration because it hasn't been analyzed is preposterous. The purpose of the Draft EIS was to provide the mechanism where all reasonable alternatives, including a no-snowmobiling alternative, could be analyzed as to their environmental impacts. The failure of the NPS to subject the no-snowmobiling alternative to such an analysis, regardless of the reasons, should not then be used to justify the exclusion of the alternative from serious consideration. As previously indicated, NEPA requires that a no-snowmobiling/no-road grooming alternative be subject to serious consideration in the Draft EIS.[33] Such an alternative cannot be avoided in this case because of the NPS's failure to subject winter use management to NEPA review nearly thirty years ago. If the NPS had complied with NEPA, and had not implemented the action prior to NEPA compliance, then a no-motorized oversnow vehicle access alternative would have been offered as the no-action alternative because it would represent the status quo. The NPS cannot undermine NEPA at both ends by implementing the action and then, when it belatedly prepares an EIS, refusing to even give serious consideration to prohibiting the activities that were earlier implemented with no NEPA compliance.

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[21] The NPS defines a reasonable alternative as "one that not only addresses the problems identified through scoping, but also complies with the stated purposes and need for the winter use plans, as well as laws, regulations, and National Park Service policies." See Alternatives Workshop for the Winter Use Plans and Environmental Impact Statement for Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway. None of the alternatives evaluated in the Draft EIS is consistent with NPS laws, regulations, and policies and, therefore, none can be deemed reasonable.

Other potential alternatives which could have been considered are identified below. The fact that these alternatives are identified here does not mean that they necessarily would comply with NPS legal mandates or that they would be supported by The Fund or BLF. They are offered because there is no legitimate reason why they were not considered, they are technically and logistically feasible, and to demonstrate that the present list of alternatives is inadequate.

- Close YNP to all motorized oversnow vehicle access except for the south entrance road to Old Faithful while retaining all existing uses in GTNP and JDRMP. This alternative would reduce the environmental impacts of snowmobiles and groomed routes on wildlife in YNP. This has been proposed by Dr. Mary Meagher who, in her November 17 comments on the Draft EIS, stated that:

> ...no other solution will maintain a bison population within Yellowstone National Park that functions according to fluctuations in natural ecological parameters. After nearly 2 decades of learning from and thinking about the ramifications, I see no other biological solution. No other approach will preserve this unmatched natural resource that the agency is charged to protect.

- Close YNP entirely to all motorized oversnow vehicle access while continuing to permit snowmobile use of GTNP and JDRMP on the Continental Divide Snowmobile Trail and other routes if wildlife impacts can be prevented.

- Reduce motorized oversnow vehicle access to the Parks to a single month and restrict the number of users which can access the Parks each day. This alternative, while it would not eliminate adverse impacts, would concentrate these impacts into a single month while reducing the impacts by limiting the number of daily users.

- Permit motorized oversnow vehicle access to YNP on the following routes: Mammoth to Indian Creek campground; west entrance to 7-mile bridge; south entrance to Lewis Lake campground; and the east entrance to Sylvan Lake (or Sylvan Pass). This alternative was suggested by Caslick (1997) as a means of protecting the unique and fragile thermal areas located primarily in the interior of YNP which provide crucial winter habitat for park wildlife, particularly ungulates.

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[33] This expectation was included in the EIS scoping comments submitted by Schubert & Associates on behalf of The Fund.

- Prohibit road grooming, severely restrict the number of snowmobiles permitted in the Parks each day, and reduce the season length for snowmobile use in the Parks. This alternative would eliminate road grooming which is not currently legal and would reduce the impacts associated with motorized oversnow vehicle access by establishing a limited daily quota of snowmobile entering the Parks and by reducing the length of the winter season for motorized users.

4. The Draft EIS fails to disclose or discuss the significant environmental impacts associated with trail grooming:

As previously indicated, road grooming to delineate snowmobile routes is not permitted by NPS regulation. Yet, through the discretionary authority of the Superintendent, road grooming has been practiced in YNP since the early 1970s. Far from being a relatively innocuous decision, road grooming results in substantial environmental impacts which have never been appropriately evaluated by the NPS. Not only must the NPS discuss the legal basis for grooming snowmobile routes, but it also must provide a comprehensive evaluation of the environmental impacts of trail grooming instead of continuing to consider grooming to be a relatively benign activity which has always been practiced in the Parks.

First, trail grooming is directly correlated with snowmobile use. As evidenced by a survey conducted of national parks which permit snowmobile use, those parks which permit trail grooming receive far more snowmobile use than parks without groomed routes. Of the 28 park units in the lower 48 states surveyed, only 6 are *known* to permit trail grooming. Of these six, four (i.e., YNP, GTNP, JDRMP, and Voyageurs National Park) receive far greater snowmobile use than nearly all of the remaining Parks.[23] In YNP, grooming was initiated by the concessionaires, but quickly became an accepted practice by the NPS (Yochim 1998). According to former YNP Superintendent Jack Anderson, grooming substantially increased snowmobile use in the park:

> We made a determination that we should expend some funds and experiment a little bit with road grooming. ... Once we started that, then the whole program started to explode and travel increased perceptibly ... The increase in use just came automatically, almost simply because we had started grooming. It made the [park] unit safe, gave a pleasant

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[23] The only parks which experience significant snowmobile use and do not facilitate that use by grooming snowmobile routes are the Rocky Mountain National Park and Pictured Rocks National Lakeshore. In Rocky Mountain National Park, approximately 86 percent of snowmobile use occurs along a 1.5 mile stretch of road which traverses the corner of the park between forest service and private land.

> trip, and yet it gave access into the Park. You know what happened after that. Cited in Yochim (1998).

As the number of snowmobiles increase, their direct, indirect, and cumulative impacts increase. More snowmobiles correlate to more pollution and greater degradation of air and water quality, greater impacts to wildlife as a result of disturbance and harassment, greater impacts to the natural quiet of the parks, and increased disturbance of non-motorized recreationists. If groomed snowmobile routes did not exist, snowmobile use of park units would likely decline due to the increased difficulty of operating snowmobiles under such conditions, decreased enjoyment associated with snowmobile recreation, and due to the increase in time required to access park features.

Second, trail grooming alters snowmelt patterns and may increase the susceptibility of road surfaces to damage. Grooming compacts the snow on many of the paved road surfaces in the Parks to create a smooth thoroughfare to facilitate snowmobile access. As evidenced in the scientific literature, compaction of snow results in a decrease in temperature compared to non-compacted areas. The compression of the snow crystals along with the reduced temperatures not only slows snowmelt in the spring, but it also may exacerbate road damage.

A reduction in the rate of snowmelt may impact hydrologic patterns and can lengthen the time period during which toxic compounds are released into the aquatic environment. NPS studies demonstrate that such compounds are present in the snowpack, including on the groomed road surface so the potential for the release of toxins into the aquatic system is present. A release of such toxins, whether it occurs rapidly or more gradually, may result in damage to aquatic species and their habitat.

In the Parks in the spring the NPS plows the groomed routes in order to facilitate Park entry by automobiles by mid-late April. Since the timing and techniques used for plowing the routes in the spring are not disclosed in the Draft EIS, it is unclear how these practices may influence the melting rate of groomed routes. The use of heavy machinery to break up and clear the groomed routes may exacerbate road damage. Anyone who has driven in the Parks, particularly YNP, is well aware of the substantial damage to the road surface. While some of this damage is expected as a result of wear and age, the direct, indirect, and cumulative impacts of grooming and plowing may increase the severity and scope of damage. The NPS must disclose and discuss the impact of grooming and plowing on the road surface since this constitutes yet another impact of snowmobile recreation on the Parks, non-winter park visitors, public safety, and on park budgets.

Third, groomed snowmobile routes are used by wildlife as energy-efficient travel routes. The Draft EIS, referenced studies, and the scientific literature document that a large number of wildlife species use groomed snowmobile routes to expedite and ease movements. While bison in YNP have received most of the attention in regard to their use of the groomed trail system, other wildlife including elk, mule deer, coyotes, foxes, wolves, and moose have been documented to use groomed snowmobile routes. Such use asserts unnatural influences on wildlife populations. Not only may wildlife use of groomed trail alter wildlife distribution, movement, habitat use patterns, and predator/prey dynamics, but because of the energy savings associated with such use, wildlife population dynamics may be substantially affected. Though the Draft EIS claims that wildlife use of groomed routes in the winter, because of the energy savings, is a beneficial impact, because of the natural regulation mandate of the NPS such an impact is entirely unnatural and should not be considered beneficial.

6. The Draft EIS does not properly *disclose* or *evaluate* the substantial impacts of snowmobiles and groomed routes on wildlife in the Parks:

Despite the fact that an EIS is intended to contain a comprehensive and objective evaluation of the environmental impacts of the action under review, the Draft EIS frequently provides only a *minor* glimpse of such impacts by whitewashing its review of many critical issues. The analysis of the impacts of snowmobile and groomed routes on wildlife is a classic example of avoiding a comprehensive review of the available evidence either because the NPS did not have the time to expand its analysis or, perhaps, as an intentional strategy to downplay the significant direct, indirect, and cumulative impacts of these activities on wildlife.[26] The NPS cannot claim that it was unaware of the evidence as both Attachments 1 and 2 contain summaries of the evidence which could have and should have been used by the NPS in the Draft EIS. To ensure that this evidence is considered as the EIS process continues, this information is included below. The information has been augmented with new evidence or analysis as necessary to demonstrate the severity of the adverse impacts of snowmobiles and groomed routes on wildlife.

A number of environmental variables, including climate, influence ungulate productivity, survival, and calf recruitment. For bison in YNP, however, Dr. Mary Meagher, a former NPS biologist and the world's leading authority on YNP bison, has concluded, based on decades of data and research, that "the existence of snow-packed roads... was the largest factor in contributing to population increase, major distributional changes, and ultimately habitat impacts" (Meagher 1993 – Included in Attachment 1) (emphasis added). While the majority of the information presented here focuses on the short and long-term, direct and indirect, ecological, and biological implications of bison use of the groomed trail system in YNP, the same concerns, impacts, and implications are relevant to other ungulates who also utilize the groomed routes as energy efficient travel routes.

According to Dr. Meagher, these groomed routes provide bison with energy efficient travel corridors resulting in energy savings within traditional foraging areas while promoting range expansion, major shifts among previously semi-isolated subpopulations, reduction of winterkill, and an enhancement of calf survival. As a result, YNP's bison population is artificially maintained at a large size which, in turn, has resulted in increased habitat impacts, and the annual movement of hundreds of Park bison into Montana and Wyoming, where most are killed.

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[26] Other examples of issues which were poorly evaluated in the Draft EIS include the impact of snowmobiles and trail grooming on threatened and endangered species and subnivean wildlife impacts, and the impact of snowmobile emissions on air and water quality. Additional information about these impacts is either provided in this comment letter and/or is included in Attachments 1 and 2.

The fact that snowmobile use and road grooming necessarily must occur in the winter months exacerbates the impacts of these actions on wildlife because the animals are already in a stressed condition as a result of winter climate. Winter is a critical period for wildlife. Winter climate, including snowfall, depending on its severity and duration, can have a substantial regulatory influence on many wildlife species, particularly ungulates. This is one of several natural regulatory controls on the growth of ungulate populations.

Energy is of crucial importance in the winter. As winter progresses, many animals experience a negative energy balance, with more energy being used to survive than is being consumed in the form of forage. Natural (i.e., predators, snow) or, artificial (i.e., snowmobiles, hunting) perturbations to an animal's environment or behavior which affect, either negatively or positively, an animal's energy balance or stress level can have a substantial effect on survival and productivity, and can impair immune function (Dorrance et al. 1973, Greer 1979, Moen 1978, Hudson 1973, Harlow et al 1987). Moen (1976), for example, stated that:

> Energy and material resources available to white-tailed deer (Odocoileus virginianus) are at their lowest point in the annual cycle during the winter season as weather conditions present a thermal energy sink of greatest relative proportions; there is no positive increment to food resources, snow often renders some of the food unavailable, and accumulating snow increases the energy expenditure necessary for movement.[25]

Snow cover affects an animal's energy balance in several ways. First, snow cover may act as a hindrance to wildlife movement, effectively restricting the amount of habitat available to wildlife in the winter (Formozov 1946, Sweeney and Sweeney 1984). The ability of wildlife to use areas covered with snow depends on variables such as leg length, chest height, foot load, momentum or velocity, body weight, snow density, snow depth, snow hardness, and type of movement (i.e., trotting, walking, running) (Parker et al. 1984, Mattfeld 1973, Telfer and Kelsall 1984). Second, snow cover reduces the availability of forage critical for survival during the winter. (Formozov 1946, Parker et al. 1984). With an increase in energy expenditures caused by moving through snow combined with a decrease in the amount of available forage (Severinghaus 1947, Leopold et al. 1951), a negative energy balance is created, in which more energy is expended than is consumed. As reported by Parker et al., (1984):

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[25] Although this study was on white-tailed deer, its findings and conclusions are generally applicable to many ungulate species and other wildlife, since winter affects the energy balance of many species in similar ways. Indeed, many of the studies on winter impacts to particular species, including studies cited in this petition, appear relevant to many other species.

> Snow cover is a major factor influencing the survival of wintering ungulates because it affects their ability to escape predation, the timing and magnitude of migratory movements, and habitat selection. Snow impedes movement, increases energy expenditure, and reduces forage availability. While three basic properties of snow -- depth, density, and hardness -- influence wintering ungulate populations, snow depth has been considered the most important attribute affecting ungulate movement and mobility."

Several studies have demonstrated, for example, that free-ranging elk herds are generally restricted in distribution by snow depths greater than 46 cm (Beall 1974, Leege and Hickey 1977, Adams 1982). Bison movements are likely similarly affected by snow.

Increased energy use resulting from travel through snow may also affect wildlife movements, production, and survival. In elk, for example, the energetic implication of travel through 58 cm of snow is approximately five times the cost of locomotion without snow (Parker et al., 1984). This cost is a function of the depth to which the animal sinks in snow and snow density. Sinking depth and snow density, in turn, are influenced, respectively, by foot loading, leg length, and velocity, and snow depth and hardness. Considering these factors, and given the sheer size of bison, energy costs for traveling through snow must be higher than that reported for mule deer and elk. Conversely, YNP bison may obtain a greater net energy benefit by using groomed snowmobile routes than that achieved by elk or mule deer.

While energy use would be expected to be greater during severe versus mild winters, Hobbs (1989), in his model examining energy use in mule deer, determined that total energy expenditure during a mild winter exceeded predicted expenditure during a severe winter, despite increases in costs of thermoregulation and activity in response to severe weather. As explained by Hobbs, "This seeming paradox occurred because energy intake was greater during a mild winter, and, hence, weight loss was substantially less. Thus, because deer were heavier and because energy expenditure is strongly influenced by body mass, total energy costs were greater during mild winters than severe ones." If this model is accurate, then larger animals, like bison, elk, and other ungulates, would not necessarily benefit energetically from mild winters because of increased energy needs associated with increased body size. Though the total energetic expenditure may be less during severe winters, Hobbs found that energy intake was substantially less and the impacts of disturbance substantially greater during severe winters. Consequently, the impact of snowmobile use on wildlife is likely to be greater during severe winters, but the impacts are not mitigated simply due to mild winter weather conditions.

While winter climate, particularly snow, has an enormous impact on animal energy expenditures and stress, that impact is exacerbated by snowmobiling, and trail grooming, due to the disturbance they cause to many species of wildlife. Indeed, researchers have suggested that additional human caused stress on wildlife in the winter is undesirable (Dorrance et al., 1973; Greer 1979, Moen 1976), since it may increase energy use and stress resulting in increased mortality, decreased productivity, and changes to behavioral adaptations (Moen 1976, Freddy 1977). The effects of recreation-induced stress, including lower reproductive output (Geist 1978), however, may not be evident immediately, but rather may appear days, weeks, months, or years after disturbances (Gutzwiller 1991). Moreover, recreation-induced stress may exacerbate the effects of disease and competition, and lead to higher mortality well after disturbances occur. Id

In many instances, snowmobiles induce animal flight, causing increased energy expenditures. In Yellowstone, for example, evasive maneuvers in response to snowmobiles have been documented in a number of species, including elk and mule deer. These maneuvers result in increased energy expenditures for the affected wildlife.[26] For example, Aune (1981) reported flight distances of 33.8 meters for elk and 28.6 meters for mule deer in response to snowmobiles in Yellowstone. The energy cost estimates calculated for these impacts were 4.9 to 36.0 kcal in elk and 2.0 to 14.7 kcal in mule deer per disturbance (Parker et al., 1984). These energy expenditures are roughly equivalent to the necessary additional consumption of 4.3 - 31.7 grams of dry forage matter by elk and 1.8 - 12.9 grams by mule deer each time a disturbance occurs. Id. Severinghaus and Tullar (1978) provide an even more graphic example of the potential implications of energy use on wildlife, and specifically white-tailed deer: they theorize that for white-tailed deer, during a 20-week winter with snowmobile harassment each weekend, "food enough for 40 days of normal living would be wasted just escaping from snowmobiles." (emphasis added).

Similarly, Freddy et al. (1986) documented that mule deer moved 158 meters when fleeing from a single encounter with a snowmobile resulting in energy costs per encounter of 10-22 kcal or 0.4-0.8 percent of the daily metabolizable energy. If disturbed by snowmobiles while grazing, the cost per encounter was 0.6-1 percent of their daily metabolizable energy. If disturbed while lying down, the energy expenditure per encounter increased from 2 to 10-25 kcal due to the flight response exhibited by the deer.

The negative energy balance experienced by most wildlife species in the winter results in the depletion of critical fat reserves. The depletion of fat reserves can result in high winter mortality. Human perturbations to an animal's habitat or behavior can lead to increased stress and energy use resulting in increased loss of fat reserves. The direct and indirect consequences of the depletion of fat reserves associated with energy used while moving through snow are precisely those factors which should be regulating the size of Yellowstone's bison population and perhaps other YNP ungulate populations if natural regulation was permitted to function in the Park. In YNP, however, natural regulation does not function in this fashion because of the groomed trail system.

The NPS has admitted that bison, elk, and moose use groomed routes and that such use facilitates access to feeding areas and reduces energy requirements needed to move through deep snow (See 1990 Winter Use Plan and Environmental Assessment (WUPEA) at 62).[27] In YNP bison, such energy savings have resulted in a decrease in natural winter kill and an increase in survival and productivity. Moreover, the groomed routes provide the bison with increased access to additional or alternative wintering habitat both in and outside of YNP.[28] The population size, movements, and distribution of other ungulate species may be similarly affected as a result of their reliance on the groomed trail system as an energy efficient travel route.

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[26] Indeed, of all recreational activities studied by Aune (1981), the most significant expenditures of energy created by recreationists occurred "during interaction along the groomed snowmobile trail and when photographers moved up for a closer shot."

In response to the potential impact of energy savings on the survival and viability of individual animals, the NPS has in the past dismissed this effect by claiming that "encounters with visitors sometimes result in the animals being driven for long distances rather than exiting the road corridors over the high berms, and this increases animal stress and energy consumption" (WUPEA at 62). This admission, though it provides clear evidence of the direct impact of snowmobile use on the stress, energy balance, and ultimately survival of individual animals, fails to consider the different temperament and behavior of various ungulate species in response to snowmobiles and other factors.

The stolid temperament of bison permits their use of groomed routes even in the presence of large numbers of snowmobiles. Moreover, even bison who are initially skittish around snowmobiles quickly become habituated to the machines (Meagher 1993, Aune 1981)[29], thereby reducing energy loss associated with avoiding snowmobiles. For these animals, acclimating to snowmobiles is not beneficial since it facilitates use of the groomed trail system which, in turn, stimulates bison emigration from the park where most are killed. For other ungulates, such evasive maneuvers in response to snowmobiles may occur, though habituation has been observed in mule deer and elk in YNP (Aune 1981).

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[27] A variety of other species have also been documented using snowmobile roads, including white-tailed deer (Richens and Lavigne 1978), wolves (Paquet et al. 1997; International Wolf 1992), coyotes (Aune 1981), red fox (Neumann and Merriam 1972), mule deer (Aune 1981), and elk (Aune 1981).

[28] Though YNP's snowmobile use policy has resulted in an artificially elevated bison population and unnatural movement and distribution patterns causing habitat impacts, a proposal to artificially maintain YNP grizzly bears at abnormally high levels through instituting a supplemental feeding program was rejected by YNP (See 1983 Natural Resources Management Plan and Environmental Assessment). In making this decision, the YNP concluded that past management programs incorporating artificial elements generally proved disastrous on a long term basis. This is precisely what is occurring with YNP bison as a result of trail grooming and snowmobile use.

[29] As snowmobile traffic increased, however, both Aune (1981) and Meagher (1993) reported increased bison use of the groomed routes at night to avoid harassment. Aune (1981) also noted this same temporal shift in other YNP wildlife. Such reactions are not necessarily evidence of habituation, but rather demonstrate that snowmobiling in YNP is resulting in enormous physiological impacts to YNP wildlife causing rather drastic behavior adaptations.

While some animals may become accustomed to snowmobiles (Meagher 1993; Aune 1981), this does not mean that snowmobile impacts to the species are benign. The decrease in animal response to a particular stimulus over time may be in response to a progressive weakening of an animal's physical condition throughout the winter (Richens and Lavigne 1978, Severinghaus 1947) and/or to preserve critical winter energy stores. Although an animal's physical response to a particular stimulus may decrease in intensity with time, internal or physiological responses (e.g. stress levels, heart rate) may consistently rise as a result of such stimuli (Moen et al., 1982, MacArthur et al. 1979, Moen et al. 1978a, Cherkovbick and Tatoyan 1973, Thompson et al. 1968). Such an increase may impair the survival and productivity of an animal.

In his studies involving captive white-tailed deer, for example, Moen et al., (1982), demonstrated an increase in the heart rate of the deer at least 250 percent over baseline levels as a result of snowmobile activity even when the animals did not stand up or move away (See also, Freddy 1977). In response to these findings, Moen et al., (1982) concluded that: "Increases in heart rate and additional movements caused by encounters with snowmobiles must increase rather than decrease energy expenditures by deer. Such increases have the potential to affect the productivity of individuals and, ultimately, of the population."

Thus, even if animals demonstrate no physical response to the presence of snowmobiles, they still may be experiencing adverse effects due to increased stress caused by the machines. Nevertheless, if YNP wildlife habituate to snowmobile presence, this may reduce energy loss associated with evading snowmobiles while increasing energy gains, and the direct, indirect, and cumulative impacts of such gains associated with the use of the groomed trail system. Moreover, even if YNP bison and other wildlife demonstrate a flight response when approached by snowmobiles, the energy cost associated with that extra movement and increased stress may be more than offset by energy gains through the use of the groomed routes.

In Yellowstone, for example, bison use of the energy-efficient groomed roads has reduced the proportion of the bison population succumbing to natural mortality,[30] increased survival and productivity, and provided bison with access to additional or alternative wintering habitat both in and outside of the Park. As a consequence, Yellowstone's bison population in the fall of 1994 was nearly double the size that would naturally exist if groomed roads were not present. (Meagher et al., 1997). Consequently, the artificiality of the system is resulting in significant and severe impacts to the bison population and Yellowstone's ecology, including the slaughter and shooting of bison outside of Yellowstone's borders,[31] the functional use (i.e., the ability of bison to use the range given their feeding ecology and gregarious behavior) of bison winter and summer range, and adverse impacts to critical winter survival habitats within the geothermal areas in the Park.[32] (Meagher 1993, Meagher et al. 1997, Caslick 1997).

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[30] The proportional decrease in winter kill is reflected in population and winter kill estimates after the winters of 1981-82, 1988-89, and 1991-92. During the winter of 1981-82, which was relatively mild in regards to both temperature and snow accumulations, 66 and 237 winter kill bison carcasses were located in the Pelican and Mary Mountain winter areas respectively. Under similar winter conditions during the winter of 1988-89, 58 and 232 winter killed bison were found in the two wintering areas. Though the winter kill numbers remained essentially the same, the bison population size increased from 2,000 to 3,000 during that time. During the winter of 1991-92, a winter with a very severe beginning, 53 winter killed bison were found on the Mary Mountain winter areas with other observations indicating minimum winter mortality in other areas. Yet, between 1988-89 and 1991-92, though over 800 bison were slaughtered outside of the Park, the population increased from 3,000 to 3,400. As concluded by

If such a groomed trail system were not available to bison, then winter movements would entail energy costs which are not currently being expended. In Yellowstone elk, for example, Delgiudice et al. (1991) determined through metabolite profiles in snow-urine samples, that elk on Yellowstone's northern range and in the Madison-Firehole area exhibited severe energy deprivation and accelerated degradation of lean body tissue in areas with increased elk density and/or deep snow cover.[33] If bison were subject to such energetic costs, then, depending on winter severity, this impact would be reflected in a proportional increase in natural winter kill and a decrease in survival and productivity resulting in a smaller population size. As a result, according to Meagher (1993), "long term population records accumulated over variable environmental conditions, suggested that minimum winter subpopulation numbers were...: northern range, 200-300, Pelican, 200-300, Mary Mountain, 1,000-1,400." Most importantly, "when winter conditions allowed these and larger aggregations without bison groups either breaking up or making major movements to new ranges, the bison appeared to have little environmental cause to travel." For Yellowstone bison a smaller population size would likely

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Meagher (1993), "The increase of numbers but decrease in mortality under stress conditions indicated the usefulness of bison movement (on groomed roads) in alleviating effective severity of winter conditions."

[31] Arguably, individual animals from other ungulate species whose populations are artificially enhanced due to the presence and use of the groomed trail system also may suffer from these impacts as a result of hunting outside of the Park.

[32] These impacts are not associated with overgrazing as some would like to believe, but rather represent a cascading series of impacts resulting from bison feeding ecology combined with alteration in the spatial and temporal distribution, movements, and habitat use patterns of bison.

[33] While some elk utilize the groomed snowmobile roads in Yellowstone (Aune 1981), they do not utilize the roads as frequently as bison. Consequently, elk do not experience the same level of energy savings as accrued by bison.

reduce the number and rate of animals moving outside of Yellowstone where they are shot.[34]

As the Park Service's own bison expert has explained, the direct and indirect implications of the grooming of snowmobile routes on bison distribution, movement, and habitat use are substantial (Meagher 1993; Meagher et al., 1997) and extend beyond bison. In addition to providing access to new foraging sites within traditional winter use areas, groomed routes have directly, or indirectly, promoted bison emigration from the Park. As bison numbers increased due principally to the grooming of routes, "the process escalated, and bison used the energy efficient routes to move as groups from more harsh to less harsh wintering areas rather than scatter to survive as they did in the past" (Meagher 1993).

Moreover, as a result of the larger populations, habitat impacts have become substantial and have occurred ecosystem-wide. These impacts are not, contrary to the opinions of some, associated with overgrazing of the rangeland. Rather, as reported by Meagher et al., 1997:

> The skewed distribution coupled with the size of the population now is causing habitat consequences. Because the bison are free-ranging, and track high quality forage during growing season as it changes spatially across the Yellowstone landscape, the park is not experiencing overgrazing in the range management sense. But mechanical impact is occurring from increased numbers of buffalo wallows, routes, tree-rubbing, and so forth, especially in Hayden Valley." (See also Meagher, Unpublished Research Data, May 17, 1995; Included in Attachment 4).

In Meagher (Unpublished Research Data, July 22, 1994) (Included in Attachment 4), additional detail on bison use of the Hayden Valley and the implications of such use is revealed:

> Approximately 3000 bison used Hayden Valley at least briefly early in the rutting season. The habitat impact resulting from the high levels of bison activity is most obvious from the air (routes, dead stands of conifers, wallows). To borrow from the park's air operation people, the west half of Hayden Valley looks like a bombing range. Much would revert very quickly without the pressure, but the potential is increasing steadily for problems with some of the wallow sites on ridges (blowouts, gully heads) and some of the routes. The potential for exotic plant establishment in this highly-disturbed habitat cannot be over-stressed. The wooly hair of bison is ideal for transport of species such as yellow sweet clover, now rampant on the northern range, along roadsides and adjacent slopes.

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[34] Although snowmobile roads may in some instances provide short-term benefits to individual animals by permitting them to access new foraging areas and otherwise decrease the energetic costs of winter travel, even such a benefit is a serious disruption of those animal's natural behaviors and role in the ecosystem. In the case of Yellowstone's bison, for example, even such short-term benefits have resulted in disaster, by increasing the number of bison beyond the level that would exist absent this intrusion into the Park's natural state contributing to the emigration and slaughter of bison beyond Yellowstone borders.

> Impacts are most striking in Hayden Valley, but are by no means confined to this one area. I cannot overemphasize the ecosystem effects occurring parkwide, albeit indirectly, from bison use of the snow-packed interior park roads in winter." (emphasis supplied)

In addition, as a consequence of the larger population sizes, their impacts to the habitat, and bison feeding ecology, the usefulness, or functional value, of winter range to bison has been lost or substantially reduced.

This loss of functional value of winter range is not due to a complete lack of available forage, but rather, is a consequence of bison evolution and feeding ecology. Evolutionarily, as large nomadic herd animals bison fed in large aggregates with little distance between herd members. Their group movements and "take-a-step-take-a-bite" feeding behavior give the habitat a "mowed" appearance. Forage is still available, but to use it, the bison would have to break social bonds and increase the distance between grazing animals. Bison, however, except when absolutely necessary for survival, prefer to maintain the aggregation by moving as a group rather than breaking social bonds and separating. The groomed routes facilitate such group movements.

An example of this loss in the functional value of traditional bison winter range is the Hayden Valley. Frequent observation of range condition in Hayden Valley showed a mowed appearance of bison use areas by fall 1992 (Meagher 1993). In December 1993 -- early in YNP's winter season -- considerably less than half of the Mary Mountain bison remained in Hayden Valley, the others having left in search of alternative wintering sites.

This and other data demonstrate that "Hayden Valley (has) lost capacity as a winter bison range because preferred foraging sites had been intensively mowed after the growing season, by early winter" (Meagher 1993). As a result "functional winter range is decreasing, further forcing groups of bison to move, or to disintegrate and scatter even earlier" (Meagher 1993).

On summer range, recent data collected on bison distribution and use demonstrate that bison move onto, forage, and move off of summer range far earlier than at any time recorded in the past. As reported by Meagher (Unpublished Research Data, May 17, 1995), the reasons and potential implications of this trend are clear:

> My judgment, based on 34 years of tracking the bison population size and distribution throughout the seasons, is that it is now making maximum use of summer range. This means that regardless of numbers, ecologically the population will remain at the upper edge of the environmental resistance... The environmental parameter that ensures this likely will continue is human-made: the presence of an energy-efficient winter road system to which the bison have adapted. Use by the bison population constitutes a range expansion, allowing many more bison to survive Yellowstone's harsh winters. Also, because the bison move from more harsh to less harsh conditions, they have learned to move to earlier green-up." (emphasis added)

Due to the temporal shift in bison use of summer range along with pressures exerted by the artificially large size of the bison population, predictably, bison began to move to traditional winter ranges earlier than had ever been recorded previously (Meagher 1993). The alteration in bison use of summer range and loss or reduction in functional winter is not limited to certain areas as it has become a problem throughout the bison range in YNP. Moreover, the implications of such impacts continue to be evident to this day (pers. comm. with Dr. Meagher).

As a consequence of bison use of routes groomed to facilitate snowmobile recreation, "many of the natural regulatory influences and ecological system feedback loops have been negated" (Meagher et al., 1997). [25] Instead, YNP's bison population is being artificially maintained at a large size, the functional winter range is quickly declining, and large numbers of bison are emigrating out of the Park.[26] As the number of emigrating bison has increased, the bison management policies of Montana, Wyoming, and the National Park Service have become less tolerant of wandering bison. The policies, though unreasonable and unnecessary, are designed to minimize the number of bison afforded an opportunity to emigrate from the Park and return alive.

Most critically, the ongoing loss of functional bison winter range -- which will encourage bison movements outside of the Park -- will result in the decline in the number of bison inhabiting YNP (pers. comm. with Dr. Mary Meagher) possibly jeopardizing the long-term integrity of this population. The continuation of the annual destruction of large numbers of bison outside of the Park, including all pregnant females, will, if such mortality is additive to other forms of mortality, facilitate this decline. As Dr. Meagher has recently observed:

> The combination of the snow density/snow water content for the first of January, couple(d) with the changes in numbers and distribution that have taken place over the past 15 years dictates that at best there will likely be considerable boundary area removal. This will be additive with a likely high mortality within the park, such has not occurred since

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[25] See also July 22, 1994 bison distribution/census flight report ("Essentially all natural death controls within the park (except for sheer old age, rutting season injuries, the occasional individual for unknown reasons) have been offset in the population by the influence of the energy-efficient winter road system... This, coupled with an increased winter forage base because of road-facilitated access has brought about the bison numbers and distribution seen on this survey. (This is not to say that wet summers and mild winters do not have a contributory role to numerical increase)").

[26] The direct and indirect impacts of bison use of the groomed routes, however, are not limited to bison or bison habitat. As explained by Meagher (1993), "the entire bison population appeared to be involved, thus involving the ecological system of which bison are a part, with implications for distribution of meat-eaters such as grizzly bears, herbivory and winter-range dynamics, and associations with other producers, consumers, and decomposers." (emphasis added)

> 1981-82 when the bison also really began to use the winter road system. A population crash appears likely, and the system itself that supports bison may be collapsing. No system is open-ended over time, particularly because the bison cannot expand to new winter ranges outside the park. The key in this harsh habitat is energetics, and the changes we have made to the bison energetics by providing a hard-packed energy-efficient winter road system to a stolid-tempered large ungulate." (Meagher, Unpublished Research Data, January 6, 1997 -- Included in Attachment 4).

While a prohibition on the grooming of snowmobile routes and the use of snowmobiles and snowcoaches in YNP may not stop all bison from exiting the park, the expected increase in winter kill, decrease in productivity, and decrease in calf survival would result in a natural decline in the size of the bison population. In addition, such a prohibition would ultimately remedy the ecosystem-wide implications associated with the artificially-maintained large number of bison in the Park, and may influence the dynamics of other ungulates.

Ungulates, however, are not the only animals who have learned to use groomed routes to save energy and facilitate mobility. Neumann and Merriam (1972), for example, found that red fox activity was much greater close to the snowmobile routes apparently due to the increased mobility afforded by these routes. Similarly, a survey of wolf biologists revealed that wolves also use snowmobile routes (International Wolf, 1992). Consequently, snowmobile routes have the potential to seriously disrupt the natural dynamics and ecology of ungulates, such as the bison, predator population dynamics and ecology, and predator-prey interactions.

In addition to the impacts of groomed routes and snowmobiles on the bioenergetics, survival, and behavior of wildlife, the scientific literature also reveals that snowmobile activity can influence wildlife distribution.

In Minnesota, Dorrance et al., (1975) described a significant negative correlation between the number of deer seen along a 10-kilometer trail and low intensity snowmobile use. As a consequence, Dorrance suggests that deer home range sizes may increase in the presence of snowmobiles. Rongstad (1980) reported a similar finding from a study on cottontails, where cottontail home range size increased significantly when snowmobiles were present. Conversely, Neumann and Merriam (1972) documented reduced use of habitat near snowmobile trails by snowshoe hares, but found that red fox activity was much greater close to the snowmobile trails, apparently due to the increased mobility afforded by these trails.

On the other hand, heavy and continuous snowmobile traffic may displace animals from critical habitats (Huff and Savage 1972) or travel corridors. In YNP, for example, Aune (1981) reported that occasionally heavy traffic inhibited free movement of animals across routes to preferred grazing areas and temporarily displaced wildlife from areas immediately adjacent to the routes. Similarly, Cole (1977) noted the displacement of elk along the routes during periods of fairly continuous travel by snowmobiles in the Madison and Firehole River Valleys of YNP. Even smaller prey species, such as snowshoe hares apparently avoid snowmobile routes (Neumann and

Merriam 1970). Such displacement could be equally or more detrimental than increased energetic costs caused by movements (Hobbs 1989), and may result in reduced productivity.

The Draft EIS should have provided this level of analysis but failed to do so. While some of the impacts referenced above were included in the analysis contained in the Draft EIS, that analysis was largely superficial and did not disclose or evaluate the substantial evidence in the possession of the NPS, including Dr. Meagher's information, which reveals far greater adverse impacts associated with snowmobiling and road grooming than revealed in the Draft EIS. Such a lack of disclosure and analysis is not consistent with the purpose of an EIS or the intent of NEPA.

Even more disturbing is the fact that the NPS, despite the evidence presented by Meagher and that which is documented in the scientific literature, has never altered winter use management practices, particularly route grooming practices, to restore the role of natural regulation in wildlife management in the Parks. This lack of action, as indicated, has been particularly deadly for YNP bison. There can be little dispute that YNP wildlife, particularly its ungulates, utilize the groomed routes as travel corridors. Not only are the majority of the roads constructed in lower elevation habitat which is sought out by wildlife in the winter, but the packed snow surface provides an energy efficient travel corridor during a time when energy savings are so critical to Park wildlife. This is not to say that park ungulates utilize the groomed routes as their only travel corridors since the animals also use natural passageways and animal-created trails to move within and outside of YNP. The groomed routes are used by wildlife to access alternative foraging sites in YNP.

The NPS should not ignore, as it has, the data collected by Dr. Meagher. This data set is the most comprehensive data set documenting the movements, distribution, habitat use patterns, and other features of bison ecology available for any bison population in the world. The value of these data are that they do not represent a snapshot in time, but rather provide a picture of how bison ecology has changed over time in YNP and how that change was influenced by the availability of, and bison use of, groomed routes. While Dr. Meagher continues to evaluate her 30+ years of data, many of her preliminary findings are available in published and unpublished papers some of which were referenced in the Draft EIS and others which are referenced in this comment letter. The NPS must consider this information in its ongoing analysis of the impact of snowmobiles and groomed routes on Park wildlife, particularly bison.[27] In addition, the NPS must consider and evaluate the results of bison flight data (Attachment 4) collected by Dr. Meagher and, more recently, other NPS personnel which collectively document a change in bison distribution and movements over time which is, according to Dr. Meagher, linked to the influence of bison use of the groomed route system. As reported by Dr. Meagher in her November 17, 1999 comments on the Draft EIS:

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[27] This information includes a recent submission to the U.S. Geological Survey by Dr. Meagher in collaboration with Dr. Mark Taper and C.L. Jerde entitled "Spatial Aspects of Bison Density Dependence in Yellowstone National Park" (Attachment 5). This report provides additional information about the significance of the winter of 1981-82 to bison use of the groomed route system, reveals that bison expand their range as their density increases, and discusses the causal link between bison density and the groomed road system.

> Approximately 2400 bison comprised the Yellowstone population early in the winter of 1981-82. No population use occurred west of the Firehole (this excepts the occasional wandering bull). Note also that the lands west of the Firehole did not serve historically as a wintering area (Meagher 1973). At the beginning of winter 1999-2000 numbers of bison now use lands west of the Firehole; this use by mixed groups began in the mid-1980's and increased subsequently in both numbers and time. In other words, the park is supporting the same number of bison, but with a large portion utilizing the lands west of the Firehole, and not necessarily just in winter. However, a look at a map of park snow depths as developed by Phil Farnes shows a habitat that does not provide reliable winter range. Most of the area closes out access to winter forage for bison with an average to above average winter (snow course data). This comparison indicates that bison are using less desirable habitat (from a bison perspective) because the traditional habitats used historically and prior to 1981-82 when changes began will no longer support the same numbers.

As a result, Dr. Meagher adds that "It is my professional judgement that to continue the winter use of the interior park roads as now occurs will result in driving the bison population level downward, because the bison will be removed when they exit the park, and numbers within the park will not again increase as they did between 1982 and 1994."

Instead of relying on this compelling data to substantiate changes in winter use management, the NPS has permitted or conducted additional studies to obtain more specific data on bison use of the groomed route system. While there may be some academic interest in these studies, The Fund and BLF believe that the NPS has engaged in these actions to delay the inevitable need to make difficult decisions about winter use management, and particularly snowmobile recreation in YNP. Endless studies of the winter ecology of bison which the NPS continues to promote in several of the alternatives offered in the Draft EIS will not alter the basic fact that bison use the groomed route system and that this use has altered bison distribution, movements, habitat use patterns, and population dynamics ultimately to the detriment of the population.

The results of these more recent analyses, namely the studies done by Kurz et al., (1999) and Bjornlie and Garrott (1999) do not alter this outcome. The Kurz study was the product of the temporary road closure EA and was intended to document bison use of groomed roads in relationship to snow depth, habitat, time of day, and winter weather conditions. During the winter of 1997/98 this study focused on the road segment between Fishing Bridge and Canyon (Hayden Valley). During the winter of 1998/99 the Hayden Valley study was continued while an identical study was conducted along the Mammoth to Gibbon Falls area. It is important to note that both the Kurz study and the Bjornlie and Garrott research, because of their limited duration, provide only a snapshot of the role of groomed routes in bison ecology. As a result, these studies, unlike the research done by Meagher, do not and cannot evaluate the impact of the historical use of groomed trails by bison and how that may have influenced more current findings. Although both studies concluded that bison use of groomed roads is limited, this determination is not terribly meaningful because of historical affects, learned behavior by bison, sampling flaws, the lack of any control groups, and the limited duration of the studies. Consequently, neither of these studies should be given the same weight nor relied on as extensively as the research conducted by Meagher.

This is not to say that the studies do not provide interesting information. The Kurz study, for example, found that bison use of groomed routes increased as winter severity increased. While Kurz et al., documented proportionately little bison use of the groomed roads in their study sites (5.8 % of observation in Mammoth and 9.4 % of observation in Hayden Valley during the winter of 1998/99) these observation were done randomly during the daylight and crepuscular periods when, as Kurz et al., concede "bison activity is concentrated primarily on feeding, resting, or a combination of those activities." If bison are primarily feeding and/or resting when surveys are conducted to determine if they are using the groomed roads then the limited observations of bison on groomed roads is entirely predictable. Under such circumstances, the fact that they observed as much bison activity on groomed routes as they did is quite remarkable. Similarly, the lack of bison observations on groomed roads by NPS employees who groom the snowmobile routes at night is also not surprising because bison may exit the route before the groomer arrives and then return to the route after the groomer departs. Because the total amount of time spent observing bison was likely very limited during this study, a substantial proportion of bison use of groomed trails may have been missed. The fact that 100% of the bison groups observed in the Hayden Valley study area were on or within 25 meters of the groomed road surface indicating that the bison had easy access to the groomed route if they desired to use it and that the presence of snowmobiles, including the researchers' own machines, may have influenced bison use of groomed routes.[38]

Unlike the Kurz study which was done internally by the NPS, the Bjornlie and Garrott study was funded by the U.S. Geological Survey and, thus, was subject to peer review before it was initiated. In short, the peer review report by Drs. William Gasaway and Francois Messier (Studies of Bison Ecology and Brucellosis in the Greater Yellowstone Ecosystem: An Independent Review) concluded that even after the completion of this study "there still will be little knowledge on the influence of groomed roads on bison population dynamics and range use." In addition, the reviewers stated that "the interpretation of results in terms of significance to the population will be subjective and the controversy will remain." These conclusions were primarily due to the lack of a control group of bison for comparative purposes. The reviewers suggested a number of alternative approaches which could be considered to generate additional data from the study, including limiting the study to the simple question of whether groomed roads act as attractants to bison, but it does not appear that any of these suggestions were incorporated into the study design. As a result, the conclusion of the peer reviewers that they "are not optimistic that this study will contribute substantially to resolution of the controversy over the effects of road grooming on bison demography and space use," remains valid.

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[38] As described previously, though the stolid temperament of bison facilitates their use of groomed routes in the presence of snowmobiles, both Aune (1981) and Meagher (1993) reported that some bison flee from snowmobiles and that bison modified their movement patterns by increasing their use of groomed trails at night.

Despite these deficiencies, Bjornlie and Garrott conducted their study during the winter of 1997-98 and 1998-99 on different study sites than those used by Kurz. Like Kurz, however, Bjornlie and Garrott also found relatively limited use of groomed routes by bison but they did document use and that use increased in 1998-99 compared to 1997-98. Though they indicate that there was no statistical correlation between bison use of groomed roads and snow-water equivalents, the winter of 1998-99 was more severe than the previous winter. Bison use of roads within the study area was greatest during later November and early December and then peaked again in April when roads were relatively if not entirely free of snow. Bison use of groomed roads was also documented. This pattern of use, though it may not accurately depict the extent of bison use of the groomed route system for reasons provided below, is predictable since the alleged peak in use corresponded to time periods when human activities in YNP, including human use of the roads, was limited. In addition, Bjornlie and Garrott documented that approximately 60 percent of bison/snowmobile interactions were negative, potentially resulting in increased energy use in excess of any energy savings associated with bison use of groomed roads. Even if this finding is accurate, it provides additional evidence that snowmobile use results in the disturbance and harassment of bison in violation of NPS regulations and policies.

The accuracy of the findings by Bjornlie and Garrott are subject to question. Not only is no control available for comparative purposes, but the study has many of the potential flaws identified in the review of the Kurz study. For example, though the researchers who participated or assisted in the Bjornlie and Garrott study may have covered over 40,000 kilometers during the study, it's unclear how much time was actually spent observing bison groups. It certainly is possible that the researchers underestimated the proportion of bison who may use the groomed trail system because they could not spend entire days observing bison groups. Similarly, depending on the times when the researchers sought out bison, they may have encountered bison, as Kurz did, when the animals were actively feeding or resting instead of traveling. The fact that they examined the freshly groomed trail surface for bison tracks in the early morning prior to the rush of recreational snowmobiles may not be a useful indicator of bison use of the groomed trails at night since it is unclear how easy it is to find and identify bison tracks on the groomed route surface.

In addition, the pattern of bison use found by Bjornlie and Garrott may reflect the historical impact of bison use of groomed routes on their distribution and movement patterns. In other words, because bison have utilized the groomed route system for nearly 20 years according to Meagher's research, their distribution, movements, and use of groomed routes may be very different today than they were in the 1980s and early 1990s. The fact that bison use of groomed routes peaked in November and early December may be indicative of such a historical influence on bison ecology. Thus, the findings of Bjornlie and Garrott may reflect bison use of groomed trails during their study, but it may not accurately reflect the extent of past use which would suggest that the damage to natural processes, including the natural dynamics of the YNP bison population may have already occurred.

Finally, the NPS should disregard the analysis of bison use of groomed routes contained in the 1998 National Academy of Sciences report on Brucellosis in the Greater Yellowstone Area because the analysis is woefully inadequate and reflects a gross misunderstanding of the complex ecology of the Park and its bison and, most importantly, the direct and indirect effects of groomed trails on bison movements, distribution, habitat use, and population dynamics. The NAS assessment is fundamentally flawed because it assumes that the alleged constant rate of incremental change in the bison population over time – both before and after bison began to use the trails -- demonstrates that the trails assert no substantial influence on bison demographics. In reality, when these same data are evaluated over shorter increments of time, and in relationship with other variables – including winter climate, the impacts of routes on bison behavior, bison feeding ecology, bison population size in relation to habitat availability, and the increase in bison winter habitat within Yellowstone resulting from bison use of the trail system -- it becomes readily apparent that the groomed trails have caused and continue to cause substantial changes in bison demographics. Indeed, the rate of growth in the bison herd, its expansion beyond Park boundaries, the increased proportion of adult bison in the herd, and the constant rate of annual incremental change is, contrary to the NAS's conclusion, primarily attributable to bison use of groomed trails. Finally, without a control group for comparative purposes, the entire foundation of the NAS argument is flawed, because it is based on the ludicrous and wholly unsubstantiated presumption that the bison demographics would not have been different even if trails were never groomed in the Park.

6. The evaluation of winter use impacts to threatened and endangered species in the Draft EIS inadequate:

The analysis of potential adverse impacts of winter recreation, particularly the direct, indirect, and cumulative impacts of snowmobiling, snowcoach use, and road grooming, on threatened and endangered species is blatantly incomplete. In particular, The Fund and BLF are concerned about the adverse impacts of winter use activities, particularly snowmobile recreation, on the threatened grizzly bear, gray wolves, the soon-to-be listed lynx, and the wolverine. A more complete analysis is provided below.[30] This analysis must be considered by the NPS as it continues the EIS process and in its preparation of a biological assessment as part of formal consultation with the U.S. Fish and Wildlife Service as required by the Endangered Species Act and the Settlement Agreement.[40]

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[30] This analysis was previously provided to the NPS in the 1997 report submitted by several organizations, including The Fund, entitled "Adverse Effects of Trail Grooming and Snowmobile Use on Winter Use Management in the Greater Yellowstone Area with a Special Emphasis on Yellowstone National Park," and in the 1999 "Petition to Prohibit Snowmobiling and Road Grooming in National Parks." These documents were previously reference in this comment letter and are appended as Attachments 1 and 2. This analysis has been slightly modified through the inclusion of additional information about the adverse impact of

Grizzly Bear.

While direct snowmobile impacts on grizzlies are limited due to grizzly denning during the peak period of snowmobile use, it is now clear that indirect impacts may adversely affect grizzlies in the Parks. Indirect impacts result from the altered distribution and movement patterns of large ungulates, particularly bison and elk, caused by snowmobile trail use and the consequent availability and accessibility of carrion.[41]

For grizzlies, winter-killed carrion is "an important source of protein" during the crucial bear feeding time in the late winter and early spring after den emergence (1990 Winter Use Plan and Environmental Assessment (WUPEA) at 15; Knight et al., 1984). The importance of carrion is dependent upon the sex and age of the bear. As stated in the WUPEA:

> Adult females and young grizzlies, especially, need carrion and suffer most from its exclusion from their diet. The viability of the Yellowstone grizzly is contingent on the survival of adult females. The females, unlike adult males, constantly experience an ongoing energy crisis related to weights, mortality, and fecundity. When adult females are excluded on a regular basis from carrion sources, higher mortality and lower fecundity rates can be expected." (WUPEA at 15) (emphasis added).

Further support for the importance of ungulate carrion for Yellowstone's grizzlies was provided by Mattson and Henry (1987) who stated that:

> Spring grizzly bear habitat productivity in Yellowstone is a function primarily of ungulate availability (Knight et al. 1984). Spring productivity in turn apparently plays a major role

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snowmobiling on lynx.

[40] It also should be noted that the settlement agreement requires the NPS to prepare a biological assessment and to request formal consultation with the U.S. Fish and Wildlife Service. Settlement Agreement at 5. In addition, as a reminder, the NPS must make its biological assessment available to the public upon completion. Id. Since the NPS has not released its assessment, it is assumed that the assessment has not been completed.

[41] Air pollution impacts to Park vegetation may be another indirect affect of snowmobile use on grizzlies. These impacts may affect all components of the food chain, including grizzly bears and other threatened and endangered species, as a result of bioaccumulation of toxins in Park herbivores (See Shaver et al., 1988). In the Parks, however, little research into such affects has been conducted.

> in determining productivity, condition, and ultimately survivorship of adult female grizzlies in the Yellowstone areas. Knight and Eberhardt (1985) have identified female survivorship as key to the future viability of the Yellowstone grizzly bear population. Thus, over-winter ungulate mortality and condition are identified as an important regulatory factor, and an area where management might potentially benefit the Yellowstone grizzly bear population." (emphasis added).

The importance of carrion to grizzly bears is indisputably linked to bio-energetics. Mattson (1997) has reported that "energy from ungulate meat potentially provided approximately 70 and 56 percent of total energetic costs" (emphasis added) for male and female grizzlies, respectively. Most of this energy (95%) "was estimated to come from the largest-bodied ungulates species (elk, bison, and moose), with greatest proportional contributions by scavenged adult male bison (16%), scavenged calf and yearling elk (10%) and adult female elk that were killed (8%) or scavenged (8%)." (emphasis added) Id. Overall, moose and bison contributed to the grizzly bear diet "far in excess of their relative numbers in grizzly bear range." (emphasis added) Id. In fact, as noted by Mattson and Knight (1992), "adult bison carcasses were used proportionally more often (92% of those available) than any other type of carcass, and adult elk least often (38% of available)." (emphasis added). Of the bison carcasses, adult female bison "were the most consistently and heavily scavenged by grizzly bears." (emphasis added) Id. Thus, not only is carrion critically important to meet the energy needs of grizzlies, but a substantial amount of the carrion consumed is bison.

The availability and use of carrion, particularly bison, by grizzly bears, therefore, is of critical importance for species survival and viability. Considering the decline or variability in other important grizzly food items, including the army cutworm moth, cutthroat trout, and whitebark pine nuts, the relative importance of carrion as a spring food source for grizzly bears has increased (Gunther and Haroldson 1997). The Draft EIS refers to these principal grizzly food sources, but failed to sufficiently explain the significance of these food sources for grizzly bears or to analyze the cumulative impact of all of the factors influencing the abundance and availability of these foods, including the slaughter of bison outside YNP, the impact of disease on whitebark pine nuts, and the impact of lake trout and whirling disease on the cutthroat trout. Furthermore, the Draft EIS failed to disclose or evaluate the impact of human activities, including snowmobiling, on the availability and accessibility of carrion.

The scientific evidence reveals that grizzlies avoid humans using roads and developments even when carrion is available in those corridors (YNP/GTNP/JDRP1990). More specifically, Green and Mattson (1988) reported that carcasses 1.5 km away from active roads in Yellowstone were used more significantly than carcasses within 1.5 km of roads, while Henry and Mattson (1988) reported that carcass use by grizzlies within 400 meters of the Old Faithful-Madison Junction highway was significantly less than use beyond 400 meters (see also Mattson and Knight 1992). The potential implications for grizzly survival and viability associated with carrion availability and use are even more critical given that nearly half of the carcasses are located within 400 meters, and the majority (60 percent), within 1 kilometer of a road (Green et al., 1997).

Similarly, near human developments, Henry and Mattson (1988) reported that bear use of available carrion was significantly less within 5 km of Old Faithful with only 6-7% of available carcasses used verses 50-100% of available carcasses used beyond 5 km (see also Mattson and Knight 1992).

The negative correlation between carrion use and proximity to roads and developments is of critical importance to bear survival and viability given that most spring carrion in Yellowstone occurs on ungulate winter ranges that are located at lower elevations, near roads and developments (Houston 1982). The prevalence of carrion near roads is also undeniably influenced by ungulate (particularly bison) use of groomed snowmobile roads as travel corridors. The groomed roads, therefore, not only alter the natural distribution and movement patterns of bison and other ungulates, but also affect grizzly bear access to carrion, potentially resulting in reduced bear productivity and survival.[43] Indeed, in Yellowstone, the increased migration of bison out of Yellowstone in winter through use of the groomed routes and the subsequent killing of these animals through management actions is resulting in less carrion being accessible to grizzlies upon emergence from dens. As a result, snowmobile use on designated routes in areas occupied by grizzly bears may be resulting in a "take" of these animals in violation of the Endangered Species Act, 16 U.S.C. § 1538.

Gray Wolf

Wolves are also impacted by snowmobiling and snowmobile routes (International Wolf 1992). Like ungulates, deep snow can hinder the movements of wolves. However, because wolves have a lighter foot load than most ungulates (Telfer and Kelsall 1984), they are better able to move across snow in search of prey.

Snow depth greatly affects predator-prey interactions. Huggard (1993) documented an increase in kill rate by wolves in Banff National Park in Canada ranging from 1 ungulate/5.4 days with no snow to 1 ungulate/1.1 days in snow 60 cm deep (See also Nelson and Mech 1986). The composition of the kill also increased with a larger proportion of calves taken at intermediate snow depth and more adults killed at deeper snow depths. Snow depth influences the vulnerability of ungulates to predation by creating a physical impairment to escape (Nelson and Mech 1986), by reducing ungulate fat reserves due to increased energetic needs to travel through snow (Mattfeld 1974, Parker et al. 1984), and by restricting forage intake (Ozoga and Verme 1970). Thus, as reported by Nelson and Mech (1986), the cumulative effect of this energy drain, especially in late winter, decreases deer physical condition and predisposes them to wolf predation.

Since wolf survival and production is affected by winter food intake, the availability and accessibility of prey in winter affects wolf numbers (Nelson and Mech 1986). Snowmobile routes, whether created by snowmobiles or grooming equipment, may adversely alter predator-prey dynamics, habitat use, predator and ungulate movement and distribution patterns, thereby affecting the availability and accessibility[illegible] of prey to predators, and also affecting community structure and composition (Paquet et al. 1997). These routes can also facilitate predator expansion into areas where they are more likely to have negative interactions with humans, pets, and cattle.

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[43] Grizzly avoidance of ungulate carcasses near roads may also cause artificial alterations to grizzly movements, distribution, and predator/prey interactions in conflict with NPS grizzly bear management policies, possibly leading to greater human grizzly conflict.

For example, Paquet et. al (1997) compared wolf use of modified routes (i.e. plowed roads, snowmobile routes, and ski trails) to natural trails (i.e. trails made by wildlife) in several national and provincial parks in Canada. Their data reveals that "wolves ... clearly preferred established travel routes (modified routes) composed of compacted snow, snow free roads, and open areas of shallow snow." Wolves also used human-modified routes in the winter to cross or traverse upper elevation areas where normally such movements would be precluded due to excessive snow depth.

Similarly, wolves have difficulty moving in snow deeper than 50 cm (Pulliainen 1982). Consequently, in Parks like Yellowstone where wolves are present and snow depth in some areas may exceed 50 cm, wolf movements and use of these areas may be precluded by snow depth. Similarly, elk are generally restricted in distribution by snow depths greater than 46 cm (Beall 1974, Leege and Hickey 1977, Adams,1982). If modified or groomed routes traverse these areas, however, they provide energy and movement efficient travel corridors for wolves and elk to access habitats that otherwise would not have been available. Such an effect, as Paquet et al. (1997) reports, could have unanticipated consequences, including: the modification of wolf predation by facilitating movements between patches of prey; changing the relationship between habitat use, prey distribution, and topography; altering dispersal patterns; and facilitating access to winter ungulate ranges or agricultural areas which would normally be unavailable.

Excessive snowmobile use may also displace wolves, grizzly bears, and other species from critical habitats (Huff and Savage 1972; International Wolf 1992), travel corridors, and den sites. Purves et al., (1992), for example, documented grizzly bear and gray wolf habitat use and displacement in Banff, Yoho, and Kootenay National Parks in Canada, and concluded that wolves showed aversion to regions where winter human use exceeded 10,000 visitors per month. This level of use is easily exceeded in several Parks, including Yellowstone, Grand Teton, and

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[illegible] Since prey are more easily killed by predators in deeper snow, ungulate use of snowmobile routes to access and use alternative wintering sites at lower elevation and with less snow, may adversely impact the ability and efficiency of wolves to kill wild prey to meet their nutritional requirements. In turn, wolves may alter their movements to correspond to changes in ungulate movements, and/or may pursue alternative prey, including domestic livestock.

Voyageurs where wolves are known to exist and snowmobiling is permitted.[48] Snowmobile disturbance has also been determined to cause den abandonment (Stephenson 1974, Carbyn 1974). Moreover, Aune (1981) found no evidence of wolf, wolverine, or mountain lion activity in his study of winter recreation impacts on wildlife. However, given the abundance of sufficient prey and carrion in the area, Aune theorized that "winter recreation activity may prevent occupation of critical habitat for such species due to a lack of needed isolation." (emphasis added).

Lynx:

Lynx, a species which the Fish and Wildlife Service recently proposed to list as threatened, is also adversely affected by snowmobile use. According to the proposed rule (63 Fed. Reg. 36993):

> Snowmobile use in the Great Lakes and Rocky Mountain/Cascades regions has resulted in an increase in both human presence and the prevalence of packed snow corridors in lynx habitat. The increased snowmobile use and the increased area in which snowmobiles are used likely diminished habitat quality for lynx, and also decreases the lynx's competitive advantage in deep snow. This results in an increased threat posed by competitors, as a result of the increase in hard-packed snow routes.

Koehler and Aubry (1994), for example, determined that inter-specific competition during late winter, a time when lynx are already nutritionally stressed, may be especially detrimental to lynx.[49] Snowmobile routes and roads that are maintained for winter recreation enable coyotes and bobcats to access lynx winter habitat (Koehler and Aubry 1994). Consequently, the presence of snowmobiles and snowmobile routes on public lands occupied by lynx are likely to adversely impact the survival and viability of such populations.

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[48] In Voyageurs National Park, research has demonstrated that gray wolf activity in specific bays appears to occur when snowmobiles are not present (DOI/VNP1996). The report concludes that, "A biological interpretation of these results indicate wolves tend to avoid snowmobile activity in restricted use areas. It is reasonable to assume that a disturbance-threshold exists where repeated avoidance by or displacement of an animal may result in: (1) more permanent replacement of the wolf or wolves; (2) impact on an individual animal's winter energy budget as to adversely affect productivity or survival; or (3) conditioning the animal to avoid certain areas.

[49] Canada lynx may be displaced or eliminated when competitors (e.g., bobcat, coyote) expand into its range (deVos and Matel 1952, Parker et al. 1983, Quinn and Parker 1987). The Canada lynx is at a competitive disadvantage against those other species because it is a specialized predator, whereas bobcat and coyotes are generalists that are able to feed on a wide variety of prey. Historically, bobcat and coyotes have not been able to compete with lynx in areas that receive deep snow, where lynx are much more highly adapted (McCord and Cardoza 1982, Parker et al. 1983, Quinn and Parker 1987). When snowmobile routes are available, coyotes and bobcats, can exert a greater impact on snowshoe hare populations -- the predominant prey of the lynx -- than if snowmobile routes were not available (Murray and Boutin 1991).

Human disturbance can also adversely impact Canada lynx survival and habitat use. Again the proposed rule to list the lynx as a threatened species states that:

> Elevated levels of human access into forests are a significant threat to Canada lynx because they increase the likelihood of lynx encountering people, which may result in displacement of lynx from their habitats and/or possible injuries or deaths by intentional or unintentional shooting, trapping, and vehicle accidents (Hatler 1988, Thiel 1987, Brinsall et al. 1989, Koehler and Brittell 1990, Brocke et al. 1991, Washington Department of Natural Resources 1996, Brocke et al. 1993). Human access into Canada lynx habitat in many areas has increased over the last several decades because of increasing human populations and increased construction of roads and trails and the growing popularity of snowmobiles and off-road vehicles. In the interior Columbia River basin of Washington, Oregon, Idaho, and Montana, increased human access has decreased the availability of areas with low human activities, which are important to forest carnivores, including lynx (U.S. Forest Service and Bureau of Land Management 1997). 63 FR 37005.

Wolverines:

Though not presently listed under the ESA, the wolverine is a species designated as sensitive on many forests, which is deserving of federal listing, and which is adversely impacted by human disturbance, including snowmobile use. Copeland (1996), for example, reported that human disturbance results in den abandonment by wolverines (Myrberet 1968). Indeed, in his research in Idaho, Copeland (1996) determined that as a result of displacement and disturbance of denning female wolverines by winter recreational activities, denning habitat may be a limited and critical component of wolverine habitat. Technological advances in over-snow vehicles and increased interest in winter recreation has likely displaced wolverines from potential denning habitat, including in subalpine cirque areas, and may continue to threaten this limited resource (Copeland 1996).[46] In addition, like grizzly bears, wolverines rely on ungulate carrion as a primary food item and, therefore, activities that decrease large ungulate populations (i.e., excessive hunter harvest, displacement of ungulate populations due to excessive timber harvest and urbanization, loss of ungulate wintering areas) or make ungulate carrion less available or accessible may negatively affect wolverines (Copeland 1996).

The Draft EIS does not disclose many of the impacts, particularly the indirect and cumulative impacts of snowmobiling and trail grooming on imperilled species, summarized above.

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[46] In addition, high road densities, timber sales, or housing developments on the fringes of subalpine habitats may reduce the potential for winter foraging and kit rearing and increase the probability of human-caused wolverine mortality (Copeland 1996).

Instead, the NPS has inexplicably downplayed or ignored these serious impacts. Failing to disclose or evaluate such data in the Draft EIS is not consistent with the analysis required in an EIS by NEPA.

7. **The Draft EIS does not adequately evaluate the seriousness of the impacts of snowmobile emissions on air and water quality:**

The Draft includes information about the impacts of snowmobile emissions on air and water quality in the Parks. This information is a product of many studies undertaken in the Parks or funded by the NPS to determine the extent, severity, and impact of snowmobile emissions on the Parks, park employees, and park visitors. An additional report summarizing many of these studies was released during the public comment period and provides compelling evidence of the serious impact of snowmobile emissions on the Parks. See Flores and Maniero 1999. The Fund and BLF believe, however, that neither the Flores/Maniero report or the Draft EIS adequately or comprehensively evaluate the severity of snowmobile emissions in the Parks or their impacts on Park features, particularly aquatic ecosystems and species. Indeed, while the amount of emissions generated by snowmobiles as disclosed in the Draft EIS and the *Flores/Maniero* report are substantial and compelling, The Fund and BLF believe that the NPS underestimates the amount of pollution being generated by snowmobiles in the Parks.

The following information, which represents a more comprehensive analysis of potential pollution impacts -- the type of analysis which should have been included in the Draft EIS -- was taken from the 1999 Bluewater Network Petition to Prohibit Snowmobiling and Road Grooming in National Parks (Attachment 2). This information has been augmented with additional information which provides more evidence of the potential impact of snowmobile emissions on Park resources.

Pollution is yet another adverse impact attributable to ORV operation. The majority of ORVs, including motorcycles, snowmobiles, and ATVs, use 2-stroke engines which are highly polluting (White et al. 1993, Fritsch 1994). According to the Environmental Protection Agency, small engines account for 5 percent of total air pollution, with a significant proportion of this pollution being generated by ORVs along with motor boats, chain saws, and lawn mowers (Fritsch 1994).

The operation of two-stroke engines create dangerous levels of airborne toxins including nitrogen oxides, carbon monoxide, ozone, particulate matter, aldehydes, 1,3 butadiene, benzene, and extremely persistent polycyclic aromatic hydrocarbons (PAH). Several of these compounds are listed as "known" or "probable" human carcinogens by the EPA. Benzene, for instance, is a "known" human carcinogen and several aldehydes including butadiene are classified as "probable human carcinogens." All are believed to cause deleterious health effects in humans and animals well short of fatal doses (EPA 1993). In addition, two-stroke engines also discharge 25-30% of their fuel mixture, unburned, directly into the environment (Kolman et al. 1973). Unburned fuel contains many toxic compounds including benzene, toluene, xylene and the extremely persistent suspected human carcinogen Methyl Tertiary Butyl Ether (MTBE).

Noxious Air Emissions:

Snowmobiles destroy air quality in areas where they are used. Even a small group of snowmobiles can produce extremely high levels of pollution. According to emissions data from the California Air Resources Board (see, http://www.arb.ca.gov [1/5/99]), one hour on a two-stroke engine used by most snowmobiles and jet skis, produces more smog-forming pollution than a modern car creates in one year. A recent report on air quality in Yellowstone National Park (Flores and Maniero 1999) determined that snowmobiles were responsible for nearly all of the air pollution in Yellowstone National Park. The amount of air pollution, generated by the highly polluting 2-stroke engines which power most snowmobiles, is excessive. According to the Park Service study, on a peak day when 2000 snowmobiles enter the Park, 32 tons of hydrocarbons and 88 tons of carbon monoxide are emitted. Over the course of an entire winter, when more than 60,000 snowmobiles enter the Park, that adds up to 1,200 tons of hydrocarbons and 2,400 tons of carbon monoxide. During one winter, snowmobiles emit 78 percent of all carbon monoxide and 94 percent of all hydrocarbons released during the entire year, even though cars and other vehicles vastly outnumber snowmobiles.

Dangerous levels of carbon monoxide (CO) and particulate matter (PM) are a primary concern. CO is extremely dangerous to humans (discussed below), and particulate matter is a recently confirmed human carcinogen by the Environmental Protection Agency. Snowmobiles emit dangerously high levels of carbon monoxide. A study conducted for the National Park Service in 1997 concluded that a single snowmobile produces 500-1000 times more carbon monoxide than a 1988 passenger car (Fussell-Snook 1997).[47]

Due to the popularity and proliferation of snowmobile use in West Yellowstone, the Park Service conducted air quality studies under various conditions at the West Entrance. The park used stationary and mobile testing apparati in 1995 and 1996, focusing on carbon monoxide (CO) and particulate matter concentrations at ground level. Preliminary results indicate that CO levels exceed federal and state ambient air quality standards at certain times.[48] In fact, a reading of 36 ppm in 1996 was the highest concentration recorded for CO nationwide, including cities with notoriously high CO levels such as Los Angeles and Denver. Results from both years demonstrate a positive correlation between snowmobile density and high CO levels.

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[47] Notably, comparisons to a current model-year passenger vehicle would increase this figure significantly. Some modern cars emit only .12 grams/kW-hr as compared to CARB estimates of 1078 grams/kW-hr for snowmobiles. As a result, some snowmobiles produce almost 9,000 times more carbon monoxide during a given period than a modern car.

[48] Federal standards for CO are 35 and 9 parts per million for a one and eight hour average, respectively, 40 CFR § 50.8(a)(1)(2). State standards differ for Montana and Wyoming. In Montana, the CO standards are 23 and 9 ppm for the 1 and 8 hour averages, respectively, while Wyoming's standards are identical to those of the federal government.

Carbon monoxide impacts on human health:

Pollutants generated by snowmobiles not only contain dangerous levels of airborne toxins, but can lead to the formation of additional ground level ozone from the photochemical reaction of released nitrogen and hydrocarbons. Health risks associated with exposure to smog and nitrogen include respiratory complications such as coughing, chest pain, heart problems, asthma, concentration lapses and shortness of breath. Elderly individuals and children are particularly sensitive to ground level ozone and nitrogen.

In Yellowstone National Park studies of snowmobile emissions found that CO and PM concentrations were high enough to cause health and air quality concerns in West Yellowstone, along the snowmobile trail to Old Faithful, and in the parking log at Old Faithful (National Park Service, Air Quality Division 1995). In addition to adverse pollution impacts on visitors, Yellowstone has been forced to enclose and pump air into ranger booths at its West Entrance to protect rangers from dizziness, nausea, fatigue, headaches, and breathing problems.

Carbon monoxide is also dangerous because it binds to the hemoglobin in blood (forming carboxyhemoglobin) and renders hemoglobin incapable of transporting oxygen (Fussell-Snook 1997). Elevated levels of carboxyhemoglobin can cause neural-behavioral effects at low levels (2-3 percent), headaches and fatigue (10 percent), and respiratory failure and death at higher levels. And the general consensus among medical professionals is that the health risk from CO increases at high altitude -- a risk exacerbated by richer fuel mixtures common at higher elevations. CO is particularly hazardous during pregnancy, and to the elderly, children, and individuals with asthma, anemia or other cardiovascular disease (EPA 1991, 1994).[49] The National Ambient Air Quality Standards for CO of 35 ppm for 1 hour and 9 ppm for 8 hours were established to keep blood levels of carboxyhemoglobin below 3 percent. Notably, some scientists have criticized these standards because of evidence of adverse health effects even at these levels (Watson 1995, Greek and Dorweiler 1990).

Snowmobilers, rangers and other park visitors are exposed to dangerous levels of CO. In Grand Teton National Park, Fussell-Snook (1997) measured the amount of CO emitted from a snowmobile on a Park trail under steady-state conditions.[50] An average of 9.9 g/mile (99 g/hr) to 19.9 g/mile (795 g/hr) of CO was emitted by one snowmobile traveling from 10 to 40 mph. By comparison, an automobile emits 0.01 to 0.04 g/mile of CO under steady-state conditions, or approximately 1,000 times less than a snowmobile. The average CO measurements for a single snowmobile, recorded at different speeds and distances (25-125 feet), ranged from 0.5 - 23.1 ppm. The Montana state one-hour human exposure limit for carbon monoxide is 23 ppm.

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[49] For a summary of the human health effects of snowmobile pollutants, including carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter, see EPA (1994).

[50] Snowmobiles emit more pollutants when accelerating. The steady-state conditions in this study, therefore, represent a "best case" emission volume (Fussell-Snook 1997).

It is important to reemphasize that these measurements were based on a single snowmobile only, during steady-state conditions. Unfortunately, snowmobiles travel in packs of 2-25 units for sustained periods of time, and often accelerate over hills and banks. It is therefore clear that typical human exposure to CO is of a much greater magnitude, and represents a very significant level of toxic pollution.[51]

Pollution impacts on aquatic and terrestrial species:

Pollution emitted by snowmobiles or other off-road vehicles can result in severe direct, indirect, and cumulative impacts on aquatic and terrestrial species. As a result of direct deposition of unburned fuel into soil, snow, or water or atmospheric deposition of airborne pollutants, the impact is not limited to the snowmobile routes but, rather, are far-reaching. For example, the increased ground level smog and nitrogen concentrations mentioned above cause acid rain, acid snow, and water pollution. Direct impacts include alteration of soil and snowpack chemistries as a result of direct and atmospheric pollutants. Indirect effects include impacts to vegetation and the aquatic system which can result in adverse consequences to the varied assemblage of animals which occupy polluted sites.

The direct deposition of unburned fuel into the environment represents a substantial impact caused by snowmobiles nationwide. As previously explained, two-stroke engines release 25 percent of their fuel unburned into the environment. Collectively, considering the number of snowmobiles using the Parks this represents a substantial amount of pollution. In Yellowstone National Park, for example, of the 220,000 gallons of gasoline and 11,000 gallons of lubrication oil sold for snowmobiling by service stations in 1995, up to 55,000 gallons of fuel and 2,700 gallons of motor oil entered the environment as unburned, raw petrochemical pollution.[52]

If snowmobile routes are constructed near rivers, lakes, and streams -- as many are -- this amount of pollution poses a serious threat to these aquatic systems. Even if routes are constructed away from such sensitive areas, pollution remains a threat. Unburned fuel, for example, deposited on soil may bind with soil chemicals potentially resulting in adverse impacts on vegetation, could percolate into underground water supplies, and/or could be washed into the aquatic system by runoff. Similarly, if pollutants are deposited in the snowpack, the spring thaw will flush these toxins into the aquatic system and/or the soil will impacted thereby potentially affecting vegetation growth, abundance, and composition.

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[51] In addition, the impact of CO exposure increases with increasing altitude, especially for unacclimated individuals (National Commission on Air Quality 1980). Thus, because much snowmobile use occurs at higher altitudes, risks to human health are even greater.

[52] Gasoline sales reported by the Montana Department of Environmental Quality in a report by Howard E. Haines. Raw fuel emissions are calculated using EPA data which confirms that 25% of the fuel "consumed" by a two-stroke engine is emitted "out the tailpipe" unburned.

In Yellowstone, toxic raw fuel and air emissions accumulate in the snowpack along rivers, streams and lakes where snowmobile routes are most common. Ingersoll et al. (1997) found increased levels of sulfates and ammonium in Yellowstone's snowpack compared to baseline conditions.[33] Pollutants "locked" in the snowpack are released very rapidly during the first few days of snow melt. Researchers have found that 80 percent of acid concentrates are released in the first 20 percent of snowmelt, and that this acid pulse is a major cause of death for aquatic insects and amphibians (Rawlins 1993, Hagen and Langeland 1973). This acid pulse may also reduce the acid neutralizing capacity of aquatic systems, particularly those found at high elevations which typically are less capable of neutralizing acid deposition.[34] In one study, Charette et al. (1990) determined that "during the spring melting, the massive liberation of atmospheric pollutants accumulated in the snow cover is connected to a very important increase of acidity, which may be more than 100 times higher than the usual acidity level in surface water."

Several studies have determined that the survival, productivity, and distribution of amphibians is drastically impacted by increasing acidity (See e.g., Gosner and Black 1957, Cooke and Frazier 1976, Beebee and Griffin 1977, Saber and Dunson 1978, Freda and Dunson 1985). Kiesecker (1991), for example, found that 60-100 percent of tiger salamander eggs were dead or unviable in ponds at pH 5.0 or less, 40 percent were dead or unviable at pH levels between 5 and 6, and 20 percent were dead or unviable in water with a pH above 6.0. At pH levels below 6.0, a slower hatching rate, slower growth to maturity, and a decreased ability of tiger salamanders to catch and eat tadpoles was observed. Pierce and Wooten (1992) also documented sublethal effects of lowered Ph on amphibians (e.g., slower growth of larvae) above the levels that kill embryos. Increased acidity also may cause amphibians to avoid breeding in low pH ponds (Beebee and Griffin 1977).

The acidity of water also affected the survival of tiger salamanders. Harte and Hoffman (1989), studies a declining tiger salamander population in an acid-sensitive watershed in the Colorado Rockies. As a result of their research they concluded that less than half as many tiger salamander embryos survived at about pH 5.6 or less compared to those surviving at about pH

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[33] Research in the Sierra Nevada in California and the Colorado Rockies has shown that a temporary depression of surface-water pH and alkalinity and a simultaneous increase in sulfate and nitrate levels occur following spring snowmelt (Blanchard et al. 1987).

[34] Studies conducted in Yellowstone revealed that "many lakes and streams in Yellowstone are susceptible to acidification by atmospheric deposition" (National Park Service 1983). Similarly, in the Forest Service's Eastside Ecosystem Management Project, it was determined that concentrations of air pollutants in the snowpack "are greatest in Wyoming and in a small area within Montana just west of Yellowstone National Park. Some of the largest concentrations of sulfate, nitrate, and acidity were measured at sites near Yellowstone." (USFS 1996).

6.1 or greater and that survival of zooplankton, a common food of the tiger salamander, was also drastically affected by increased acidity. Furthermore, they found that only a brief exposure to acid is needed to induce amphibian mortality, that acidified water resulted in developmental abnormalities, and concluded that episodic acidification may have contributed to the salamander population decline.[55] Based on their results, Harte and Hoffman (1989) theorized that there are at least five possible mechanisms by which episodic acidification might reduce the salamander population. It might (1) inhibit egg development, (2) exert a direct toxic effect upon the hatchlings, (3) exert a direct toxic effect upon the adult population, (4) inhibit reproductive activity, (5) damage the food chain (See also, Schindler et al. 1985). Other amphibians, including boreal toads, chorus frogs, and northern leopard frogs also experience significant mortality when water pH is between 4.3 to 4.9 (Corn and Vertucci 1992).

In a study on the impact of two-stroke emissions on fish, Balk et al. (1994) determined that hydrocarbons disrupt normal biological functions (e.g. DNA adduct levels, enzyme activity), including cellular and sub-cellular processes, and physiological functions (e.g. carbohydrate metabolism, immune system).[56] Serious disruption of fish reproduction and fry survival also seems likely.[57] (See also, Tjernlund et al. 1995, 1996). Baker and Christensen (1991), for example, found that embryo and fry of rainbow trout have increased mortality at about pH 5.5. In the eastern U.S., where precipitation is more acid than in the West, and where some surface waters are chronically rather than just episodically acidified, fish populations have been severely depressed or eliminated in acidified lakes potentially because of adverse impacts of acidification on the food chain (Schindler et al., 1985). Adams (1975) also found that the influence of lead and hydrocarbon on stamina, measured by ability to swim against a current, was significantly less in trout exposed to snowmobile exhaust than in control fish; the exposed fish made fewer tries to swim against the current, and swam for shorter lengths of time before resting.[39]

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[55] While tiger salamanders have been determined to be particularly sensitive to increased acidity, the impact can effect the entire ecosystem. In Ontario, the artificial acidification of a lake from Ph 6.7 to Ph 5.0 resulted in an increase in biomass and change in species composition of phytoplankton when pH dropped below 6.0 (Findlay and Kasian 1986).

[56] Additional evidence of such impacts comes from toxicologist James Oris and his colleagues at Miami University who conducted a study on the effects of hydrocarbon pollution from two-stroke marine engines, the exact same engine used by snowmobiles, on fish growth. The study, funded by the National Marine Manufacturers Association, found fish growth to be decreased by as much as 46% as a result of exposure to two-stroke water pollution. Although the study addressed concern about marine engines, snowmobiles are capable of creating similar levels of water pollution in streams, lakes and rivers due to frozen or trapped hydrocarbon pollution in snowpack and polycyclic aromatic hydrocarbon contamination described above.

[57] Juttner, et al. (1995) determined that the toxicity of water contaminated by a two-stroke engine was far higher than contamination caused by four-stroke engine or a catalyst equipped two-stroke engine. Two-stroke engines also emitted significantly more hydrocarbons and volatile organic compounds into the water than a four-stroke engine (Juttner, et al. 1995a). Experiments which replaced gasoline with 96 percent ethanol reduced the persistent toxicity but the toxicity of freshly contaminated water was still high. Modifying the lubricating oils used in the fuel blend, on the other hand, had little effect on toxicity.

Vegetation can also be adversely impacted by pollution. Pollution from vehicle exhaust contain a number of elements which are damaging to vegetation. While the amount of pollutants emitted by a two-stroke engine are greater than those emitted by a four-stroke engine, the elements in the emissions, except for the unburned fuel emitted by two-stroke engines, are similar and include: 1) carbon dioxide which may act as a fertilizer and cause changes in plant species composition (Bazzaz & Garbutt 1988, Hunt et al. 1991, Ferris and Taylor 1995); 2) sulphur dioxide which is taken up by vegetation and can cause changes in photosynthesis (Winner and Atkinson 1986, Iqbal 1988, Mooney et al. 1988); 3) oxides of nitrogen which may be harmful to vegetation or may act as a fertilizer, causing changes in plant species composition (Rogers et al. 1979, Falkengren-Grerup 1986, Iqbal 1990, Wellburn 1990); 4) organic gases such as ethylene, to which plants may be extremely sensitive (Gunderson and Taylor 1988, Taylor et al. 1988); and 5) heavy metals which may cause phytotoxic damage (Atkins et al. 1982). Ozone, which is formed by the photochemical reaction of released nitrogen and hydrocarbons, may also injure plants and affect plant species composition (Reich and Amundson 1985, Becker et al. 1989, Ashmore and Ainsworth 1995, Warwick and Taylor 1995).

As an example of the potential impacts of pollutants on vegetation, Angold (1997), in his study of the impact of roads on heathland vegetation in the United Kingdom, found that changes in plant species composition was mainly a result of chemical pollution from vehicle exhausts. More specifically, he noted an increased growth rate in *Calluna* (*Calluna vulgaris*) and *Mollina* plants (*Molinia caerulea*) near the roadway associated with higher concentrations of nitrogen and phosphorus in *Calluna* plants and of phosphorus in *Mollina* plants. The increased rate of growth in *Calluna* plants was likely due to an increased supply of nitrogen from exhaust gases while increased phosphorus from soil litter may have benefited *Mollina* plants. Conversely, a lichen species, *Cladonia portentosa*, was found to be shorter, thinner, and generally less luxurious in growth nearer the road. Lichens are known to collect atmospheric pollutants (Rao and LeBlanc 1967, Rühling and Tyler 1970, Martinez et al. 1971, Ferguson et al. 1984, Boonpragob 1989) and the increase in ozone and acid rain, to which nitrogen and sulfur oxides are known to contribute, probably caused this decline.

More broadly, Shaver et al. (1988) reported that the effects of pollutants can be both biological and ecological, and both acute and chronic. Such effects on plants include foliar injury, reduced productivity, tree mortality, decreased growth, altered plant competition, modifications in species diversity, and increased susceptibility to diseases and pests. Alterations to the vegetative community are also likely to result in implications to Park herbivores and other ecosystem components. In addition, ingestion by herbivores of trace elements deposited on leaf surfaces may lead to other impacts to the individual organism and throughout the food chain.

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[39] It is not clear in Adams (1975) whether the lead or hydrocarbons, or both, reduced the stamina measured in laboratory fish. Lead contamination is not as great a concern currently because of the existence and use of unleaded fuels. Unleaded fuel, however, contains trace amounts of lead which may accumulate in the environment causing adverse environmental impacts.

Polycyclic Aromatic Hydrocarbons (PAHs):

PAHs are by-products of fuel combustion found in high concentrations in unregulated two-stroke emissions. They are particularly hazardous because they are both carcinogenic and mutagenic, and are extremely persistent in the environment. Studies by the Tahoe Regional Planning Agency (1997) have shown that PAHs can remain on the surface of the water, where fish and other species feed on phytoplankton and zooplankton. Heintz et al. (1998), in their nine year study on the Exxon Valdez spill in Alaska, documented stunted salmon growth and reproductive problems from PAHs and may have adverse effects on long-term species survival and reproduction. Of further concern, Oris (1998) and Giesy (1997) found that PAHs at extremely low levels (parts per trillion) are toxic to zooplankton, and inhibit not only zooplankton reproduction, but also the reproductive success and general growth of fish. Moreover, natural ultraviolet light can increase the toxicity of PAHs on water surfaces by as much as 50,000 times under field conditions (Giesy 1997).

The findings of these studies also correlate to studies on snowmobile emissions. In a study of snowpack contamination by snowmobiles, for example, Matthew R. Graham of the University of Nevada-Reno found elevated readings of four PAHs -- acenapthene, acenaphtylene, napthalene and phenanthrene -- in snow samples under field conditions. Graham detected levels of napthalene, for instance, of up to 12,000 ppb. According to the Occupational Safety and Health Administration (OSHA), the short-term human exposure limit (STEL) for napthalene is 15,000 ppb. OSHA's Health Hazard Data indicates that "contact may cause skin or eye irritation ... inhalation may cause headache, nausea and perspiration ... [and] ingestion may cause cramps, nausea, vomiting and diarrhea" (OSHA 1996).

Such high concentrations are particularly alarming for fish larvae, zooplankton, and perhaps other marine organisms. During an industry study, however, Oris (1998) found that much lower PAH levels (5-70 parts per trillion compared to Graham's detections of 12,000 parts per billion) cause "a significant effect on fish growth ... photo-activated toxicity to fish and zooplankton as well as direct (no-UV) toxicity to zooplankton." Giesy (1997) determined that only 19 ppb of another PAH compound (anthracene), under relatively low ultraviolet intensity (2,500 uw/cm^2 of UV-A), would kill all exposed zooplankton in 30 minutes. Furthermore, Heintz et al. (1998) concluded that sublethal levels of water contamination (as low as 1.0 ppb) stunted pink salmon growth, may fail to protect fish embryos, and caused other chronic problems.

Permitting the virtually unregulated use of snowmobiles in the Parks fails to safeguard these areas from astonishing amounts of water and air pollution which threaten park features, resources, including wildlife, and park users. Such impacts are inconsistent with provisions set forth in the Clean Water Act, the Clean Air Act amendments of 1990, and NPS regulations and policies.

8. The analysis of noise impacts in the Draft EIS is entirely deficient:

The analysis contained in the Draft EIS makes it clear that the preservation of natural quiet within the Parks is immensely important. The analysis of snowmobile impacts on natural quiet is not sufficient. Not only has the NPS failed to provide citations for some of its alleged facts, particularly a citation for a study by Bowlby and Associates which measured ambient sound levels in GTNP which forms the foundation for the noise analysis in the Draft EIS, but its overall analysis of the impacts of recreational activities in the Parks pales in quality and comprehensive to the analysis conducted in regard to the impacts to natural quiet to parks caused by aircraft overflights (See Report on Effects of Aircraft Overflights on the National Park System, 1995).

The ambient sound measurements recorded by Bowlby and Associates must be adequate and accurate for the noise impact analysis to be meaningful since the assessment of noise impacts associated with snowmobile use is based on the ambient sound levels. This report, however, could not be evaluated because it was not referenced in the literature cited section of the Draft EIS. Moreover, the NPS provided no explanation of the methodologies used by Bowlby and Associates, the location of their measurements, or the number of measurements taken. All of these factors are important in determining the legitimacy of the ambient sound assessment. If this assessment inaccurately measured ambient sound, even if the error was only 10 decibels, this could profoundly influence the results of the noise impact analysis. It has come to the attention of The Fund and BLF that these levels were indeed ten to fifteen decibels louder than actual ambient sound in the Parks, thereby invalidating the noise impact analysis.

Furthermore, the Draft EIS contains absolutely no analysis of the adverse impact of noise on wildlife. According to the Environmental Protection Agency, snowmobiles produce significant amounts of noise which acts as a physiological stressor producing changes similar to those brought about by exposure to extreme heat, cold, pain, etc. (EPA 1971). The EPA states that:

> Clearly, the animals that will be directly affected by noise are those capable of responding to sound energy and especially the animals that rely on auditory signals to find mates, stake out territories, recognize young, detect and locate prey and evade predators. Further, these functions could be critically affected even if the animals appear to be completely adapted to the noise (i.e., they show no behavioral response such as startle or avoidance). Ultimately it does not matter to the animal whether these vital processes are affected through signal-masking, hearing loss, or effects on the neuro-endocrine system. Even though only those animals capable of responding to sound could be directly affected by noise, competition for food and space in an ecological niche appropriate to an animal's needs, results in complex interrelationships among all the animals in an ecosystem. Consequently, even animals that are not responsive to or do not rely on sound signals for

important functions could be indirectly affected when noise affects animals at some other point in the ecosystem. The "balance of nature" can be disrupted by disturbing this balance at even one point.

Furthermore, the EPA anticipates that the consequences of a loss of hearing ability could include a drastic change in the prey-predator situation. It states:

> The animal that depends on its ears to locate prey could starve if auditory acuity decreased, and the animal that depends on hearing to detect and avoid its predators could be killed. Reception of auditory mating signals could be diminished and affect reproduction. (Masking of these signals by noise in an area could also produce the same effect). Detection of cries of the young by the mother could be hindered, leading to increased rates of infant mortality or decreased survival rates.

Finally, the EPA raises concerns about the findings of changes in the reproductive organs and sexual function of animals exposed to noise. These impacts, according to the EPA, "should be viewed as possible serious threats to the animal's reproductive capacity.

There is no evidence that the Park Service has conducted any studies to determine what impact this level of noise is having on Park wildlife. Even if this regulation was always enforced, this does not mitigate all potential impacts. For example, in Yellowstone National Park snowmobile use is constant, not infrequent. Thus, even at 78 decibels, the continual drone of snowmobile engines may adversely impact the hearing mechanism, behavior, and survival of wildlife.[59]

In addition, even if these noise restrictions reduce adverse impacts to wildlife, it is not clear if these restrictions are consistent with Park Service regulations which prohibit snowmobile use if it affects the "scenic and aesthetic values," "disturb[s] wildlife" in National Parks, 36 C.F.R. at §2.18(c), or creates unreasonable noise impacting other Park users. Id. at §2.12(a)(1). Snowmobile noise research conducted at the Pictured Rocks National Lakeshore reveal the potential impacts of snowmobile noise on other Park users. Mestre Greve Associates 1992 as cited in DOI/VNP 1992). As reported by Voyageurs National Park, these findings reveal that:

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[59] Although Park Service regulations prohibit snowmobiles if they exceed 78 decibels at 50 feet, 36 C.F.R. §2.18(d)(1), it is not known how carefully or consistently this regulation is enforced. In addition, whether the existing Park Service noise regulations accurately portray the noise generated by snowmobiles is not certain. The 78 decibel requirement is applicable only for snowmobiles manufactured after July 1, 1975. Noise levels for snowmobiles manufactured before 1975 are higher. The regulations on snowmobile noise levels, however, appear to conflict with regulations pertaining to audio disturbances which prohibits the operation of a motor vehicle or motorized equipment in a manner which exceeds a noise level of 60 decibels at 50 feet. 36 C.F.R. §2.12(a)(1).

> Based on typical background noise conditions, noise from a single snowmobile at Voyageurs National Park could be detected at a distance of 600 feet on flat terrain and at 400 feet in rolling terrain; noise from five snowmobiles (probably the most common group size) under typical conditions could be detected at 1,000 feet in flat terrain and at 800 feet in rolling terrain. On an extremely calm day one snowmobile could be detected at 900 feet in flat terrain and at 600 feet in rolling terrain, and five snowmobiles at 1,700 feet in flat terrain and at 1,400 feet in rolling terrain.

Thus, even though Park Service regulations restrict snowmobiles to the designated roadway, the impact of snowmobiles extends much further than the road surface. The NPS must provide a far more substantive and comprehensive analysis of noise impacts on natural quiet and wildlife in order to comply with NEPA.

9. The NPS must not rely on survey findings to revise and justify its final winter use management strategy, final EIS, and Record of Decision:

The Fund and BLF are concerned about the use of certain survey data in the Draft EIS.[89] While numerous surveys have been conducted to assess visitor likes and dislikes in the Parks throughout the years, using winter user surveys to assess whether winter users will accept changes in winter use management practices, regardless of the justification for such changes, is inappropriate and is guaranteed to result in user preferences supporting a continuation of winter use activities regardless of their environmental impacts. This is not to say that all of the surveys have been inappropriate or useless because they do provide interesting information about the expenditures of winter users, the reasons they visit the Parks, and their interest in park wildlife and scenery, but asking any user group whether the activity that they participated in within the Parks should be altered or ended, is like asking Microsoft chairman Bill Gates if he supports Internet technology -- the answer is obvious and expected.

In this case, for example, the winter 1998-99 visitor survey conducted in the Parks contained several questions which referenced bison management and road grooming which have been used to assess the willingness of winter users, primarily if not entirely, motorized winter users, to accept changes in motorized oversnow vehicle access to the Parks in the winter. While the questions contained information about the impact of groomed routes on bison and the fate of bison who emigrate from YNP, predictably the majority of respondents supported no change in grooming practices to protect bison (52.1%) and preferred the current grooming practices over the proposal to plow the road from West Yellowstone to Old Faithful (55.5%).[41] These results were likely influenced by the media reports on the litigation surrounding winter use of the Parks and by the substantial controversy surrounding the proposal to close one or more routes in YNP to snowmobile access contained in the Temporary Road Closure Environmental Assessment. While the survey did not contain a question to assess the users' knowledge of the controversy surrounding winter use, it must be presumed that a portion of the users, perhaps a large majority, were familiar with the controversy either due to media reports or because of information which may have been provided to them by business interests in the gateway communities. As a result, not only is it possible that the answers provided by the respondents may have been influenced by groups representing a particular perspective on this issue, but those who chose to snowmobile in the Parks may have either not understood the environmental impacts of their activity or not cared about those impacts.

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[89] It should be noted that the NPS has not published the results of its most recent summer survey or of its national telephonic survey. That information should be distributed to interested groups for review and comment before the NPS makes a final decision on the future of winter use management in the Parks.

While the NPS is free to conduct any and all surveys that it desires to obtain information about visitor characteristics and preferences, it must not rely on the survey data in making a decision about the future management of winter use, particularly snowmobiles, snowcoaches, and road grooming in the Parks. This decision must be based on the need and obligation to protect Park features and resources from the adverse impacts associated with motorized oversnow vehicle access and must be consistent with NPS statutes, regulations, policies, and other legal guidance. The decision should not be based on winter visitor likes, dislikes, or preferences since those standards are not likely to be consistent with NPS legal mandates and with its responsibility to protect the Parks in perpetuity.

THE NATURAL REGULATION ALTERNATIVE:

The Draft EIS, as indicated previously, does not contain any alternatives which are either ecologically acceptable or consistent with NPS legal mandates. Independent alternatives offered by other interest groups, including snowmobile groups and environmental organizations, also fail to provide appropriate or legally sufficient alternatives for winter use management in the Parks. The Citizen's Solution, which is similar to Alternative G in that it would permit only snowcoach use of the Parks, would definitely address all of the air, water, and noise pollution issues inherent to snowmobile use. Because routes would still have to be groomed to facilitate snowcoach use of the Parks, this alternative does not remedy the substantial adverse impacts on wildlife associated with groomed routes. Indeed, if implemented, the Citizen's Solution could exacerbate adverse and unnatural impacts of groomed routes on wildlife by resulting in an increase in wildlife, including bison, use of groomed routes as recreational use of the routes is reduced. Limiting motorized oversnow vehicle access to the Parks to snowcoaches will substantially reduce the amount of vehicular traffic on groomed routes resulting in significant amounts of traffic-free times when wildlife may take advantage of the groomed routes as energy efficient travel routes. This impact does not justify continuing snowmobile use of the Parks, but rather supports a complete prohibition on motorized oversnow vehicle access.

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[41] Remarkably, despite the recreational and personal interests of the survey respondents, 23.4 and 23 percent of the respondents supported closing YNP to motorized winter access in response to questions about road grooming and road plowing, respectively.

Such a prohibition is at the heart of The Natural Regulation Alternative (Attachment 6) developed by The Fund for Animals in response to the alternatives offered in the Draft EIS. The Natural Regulation Alternative is the only winter use alternative offered to date which ensures the long-term protection of the natural features and resources in the Parks and which is consistent with NPS legal mandates.

The primary component of The Natural Regulation Alternative is a prohibition on motorized oversnow vehicle access to the Parks and a termination of route grooming practices which facilitate such use. The Natural Regulation Alternative does not prohibit non-motorized use of the Parks nor does it affect automobile use of the plowed road from Gardiner through Mammoth to Cooke City in YNP.[62] While such a prohibition will upset some user groups and will affect snowmobile and snowcoach visitor use and experience in the Parks in the winter, there is, as previously stated, no law which requires that such use be permitted. There are, however, many laws which prohibit motorized oversnow vehicle use in national parks given the substantial adverse environmental impacts associated with such use.

The benefits of a prohibition on motorized oversnow vehicle access to the Parks are substantial and should be obvious. In addition to eliminating snowmobile emissions and noise, a ban on these activities and trail grooming will substantially increase the protection of park wildlife, restore natural regulation as the principal management factor for park wildlife, allow natural processes to flourish to the benefit of the ecology of the Parks, and it would significantly improve the experience for non-motorized users who come to the Parks to enjoy and appreciate nature and serenity as minimally influenced by humans as possible.[63] In addition, such a ban would set a precedent for similar bans in other national parks and would enable the NPS to correct unfortunate mistakes that were made 30 years ago which have resulted in damage to the Parks and their feature and resources and which have been allowed to continue in violation of NPS legal mandates for too long. The drawbacks of such a prohibition are relatively few, while the benefits, including a recommitment to the original purpose of the NPS to preserve nature as it exists, are substantial and well worth the cost of making such a courageous decision.[64]

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[62] Though The Natural Regulation Alternative does not explicitly address non-motorized uses or automobile access to the Parks, The Fund and BLF believe that these uses must be controlled and regulated as necessary to prevent adverse and unacceptable impacts on park wildlife and ecology. The Fund and BLF also believe that the plowed route between Mammoth and Cooke City should ultimately be closed when transit between the two locations is no longer necessary in order to increase the protection and decrease artificial influences on wildlife in the Lamar Valley.

[63] If motorized oversnow vehicle access is prohibited in the Parks, this also eliminates the need for additional or enhanced infrastructure (i.e., increase in gasoline storage capacity, warming huts, purchase of snowmobiles/snowcoaches/grooming equipment) to accommodate winter users saving money, labor, and time.

The Natural Regulation Alternative also calls for a restriction on road plowing. This restriction is also intended to restore naturalness to the Park to the maximum extent possible. It is recognized that some road plowing (i.e., Gardiner to Mammoth, Mammoth to Cooke City, Highway 26/89 within GTNP, and plowing around NPS buildings and residences) is required to meet NPS and public transport needs. Road plowing which is unnecessary or which becomes unnecessary as a result of a ban on motorized oversnow vehicle access should be eliminated. This will not only save money and labor, but it will also benefit natural process and wildlife in the Parks.

Finally, The Natural Regulation Alternatives offers an innovative strategy to permit public access to the Parks in the winter if, and only if, such access is deemed desirable and necessary. This access would be accommodated through the analysis, development, construction, and use of an elevated monorail system. It must be emphasized that an elevated monorail system is not required by The Natural Regulation Alternative but is offered as a means of permitting public access to the Parks in a more environmentally friendly manner via a mass transit alternative if such access is determined to be desirable, necessary, and appropriate. As stated throughout this comment letter, the NPS has no legal duty or responsibility to permit public access to the Parks in the winter. Thus, the monorail option is not required but rather it provides a unique means of transporting people into the Parks without causing the adverse environmental impacts associated with current types of visitor access.

The short and long term benefits of an elevated monorail system easily outweighs the costs. Not only would such a system provide a more environmentally friendly means of providing opportunity for public access to the Parks in the winter but it would also be beneficial to reducing the adverse environmental impacts of motorized access during other seasons. Among other things, the summer traffic congestion, snowmobile noise and pollution impacts, and the adverse impacts associated with wildlife use of groomed routes could all be eliminated through the construction of such a system. While there would be some visual impacts associated with an elevated system, such impacts would not be any more intrusive or invasive than the visual impacts inherent in the existing modes of motorized access to the Parks. Information about alternative monorail design technologies including a bi-directional system operating on a single track and a suspended system obtained through research on the Internet and from contact with companies developing alternative transportation technologies is included in this comment as Attachment 7.

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[64] Another benefit of a prohibition on motorized oversnow vehicle use after 30 years of such use is the study of how wildlife populations, including bison, respond to removal of an artificial element (i.e., groomed routes) and motorized oversnow recreation in their winter environment. Given the existing knowledge of wildlife, particularly ungulate use of winter range in the Parks, baseline data are available for comparison purposes.

Prior to construction of an elevated monorail system, such a proposal must be subject to environmental impact analysis so that the public and decision-makers are well aware of the impacts, benefits, and consequences of such a system and to provide for public involvement in the decision-making process. If approved, The Fund and BLF envision a system which provides visitors with nearly all of the same opportunities to use and experience the Parks as are presently available. While the system would presumably be constructed in sections, ultimately the system could provide public access to all of the features of the Parks which are currently accessible by automobile, including hotels, cabins, and campsites. Hikers, including backcountry hikers, snowshoers, and cross-country skiers would be able to access most if not all of the current hiking trails.

Far from being a non-sensical option, the potential for the development of an elevated monorail system is technologically possible and must be considered by the NPS. While different in design than other innovative visitor use strategies being implemented in other national parks, the concept of providing public access to the Parks utilizing a mass transit strategy is identical to the bus and light-rail systems being implemented in other parks. Unfortunately those types of systems would not be effective in the Parks because of the unique conditions and management issues associated with winter use activities.

Overall, The Natural Regulation Alternative, with or without the development of an elevated monorail system, has merit and warrants significant and serious consideration by the NPS not just because it virtually eliminates the majority of the adverse environmental impacts associated with winter recreation, particularly snowmobiling, snowcoach use, and route grooming, but because it is the only option available to the NPS given its legal mandates.

CONCLUSION:

In August 1999, NPS Director Robert Stanton announced a rededication and recommitment to natural resource preservation and restoration throughout the national park system. This new program is dedicated to achieving a comprehensive inventory of natural resources within the national park system and to protect and preserve these resources for future generations. This program reflects a continuation of a reinvention of the NPS mandate promoted by the Leopold Report in 1963 and, more recently, by Sellars (1997). As Director Stanton stated in his speech at the centennial anniversary of Mount Ranier National Park, this renewed commitment to natural resource protection reflects the policies of Aldo Leopold who said "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

Snowmobiling and road grooming in these Parks are wrong. These activities along with snowcoach use because of its dependency on groomed routes do not belong in any national park including YNP, GTNP, and JDRMP because of the significant adverse environmental impacts associated with these activities. The winter use EIS process was intended to be an opportunity for the NPS to comprehensively evaluate the environmental impacts of winter recreation on park wildlife, ecology, air and water quality, natural quiet, and non-motorized users. This opportunity was inexplicably not seized by the NPS, and instead it elected, as it did in 1990, to produce a seriously deficient analysis which does not begin to properly address the environmental impacts of winter recreation, namely motorized oversnow vehicle access and which, therefore, is not in compliance with NEPA.

In addition to the lack of sufficient analysis of the impacts of snowmobiling, snowcoach use, and route grooming on wildlife, including bison, air and water quality, natural quiet, park ecology, and non-motorized users, the Draft EIS was fundamentally flawed because of the baseless and inexplicable presumption by the NPS that motorized oversnow vehicle access to the Park is somehow required. This presumption not only substantially compromised the integrity and usefulness of the Draft EIS, but it also prevented the NPS from seriously considering the only winter use management option which is consistent with NPS legal mandates which is to prohibit snowmobiles, snowcoaches, and road grooming in the Parks to facilitate such use. There is not a single NPS statute, regulation, policy, guidance document, or other directive which requires the NPS to provide opportunities for public access to the Parks in the winter. There are, however, a number of mandates which, given the adverse environmental impacts of motorized oversnow vehicle access and road grooming, compel the NPS to prohibit these activities.

For thirty years the NPS has stood by as the number and impact of winter recreationists, particularly snowmobile users, have escalated to a level which has resulted in the impairment and destruction of the tangible and intangible natural features of the Parks. Instead of upholding its Congressional mandate to preserve "nature as it exists," the NPS has ignored its own preservation mandates in favor of facilitating and supporting public use to the detriment of Park features, resources, values and to future generations who have yet to visit and enjoy the Parks. Whether the NPS policies toward snowmobiles and road grooming in the Parks is based on political or economic pressures, there is no justification for continuing to permit a minority user group to degrade and destroy the Parks.

As we enter a new millenium, the NPS has and must exercise this opportunity to right the wrongs of the past, to recommit itself to the management of the Parks as national parks instead of national playgrounds, and to rediscover its mandate to preserve and protect nature. These goals are only achievable if the NPS acts to ban snowmobiling, snowcoach use, and route grooming in the Parks and throughout the national park system. A failure to take such action is not consistent with NPS legal mandates and will be subject to litigation.

Thank you for the opportunity to submit these comments.

Sincerely,

D.J. Schubert

D.J. Schubert
Wildlife Biologist

Attachments (by mail)

cc: (by mail without attachments)
Mr. Bruce Babbitt, Secretary of the Interior
Mr. Don Barry, Assistant Secretary for Fish, Wildlife, and Parks

SCHUBERT & ASSOCIATES
Page 1. Re: Presumption that motorized winter access must continue. "The primary purpose of an environmental impact statement is to serve as an action-forcing devise to insure that the policies and goals defined in the Act [NEPA] are infused into the ongoing programs and actions of the Federal Government (§1502.1)." "The range of alternatives discussed in an [EIS] shall encompass those to be considered by the ultimate agency decision maker (§1502.2 (e))." The purpose and need for action described in the DEIS is sufficiently broad to act as an action-forcing tool. It is within the discretion of the decision maker to set the scope of analysis. Considering that motorized use in the Parks is an existing use, not a proposed use, it is logical to frame the purpose and need in terms that would include that use and facilitate an incremental investigation of the impacts of that use. To do otherwise, and to accept The Fund for Animal's (Fund) assertion, would result in a narrow scope of analysis and one viable alternative relative to motorized use. The settlement agreement that resulted in a need to develop this EIS requires a comprehensive evaluation of winter recreation use – the presumption that only nonmotorized use should be considered in light of policy, law, regulation and existing use, is not appropriate.
Page 2. Re: Dual or conflicting mandate. NPS asserts that there is a dual mandate which, in application, often presents management conflicts. Where management that serves the enjoyment of the people steps over a line in respect to resource preservation, the action to be taken is clear. It is that line, or threshold, or "impairment standard"(terminology coined by commenter) that is not often clear. The impacts in question are not on their face indisputable, and it is the function of an EIS to focus the issues by addressing those impacts as well as possible. The purpose and need for action was developed with this intent.
Page 2. Re: No snowmobile, no snowcoach, no trail grooming alternative. See first response, above. It is within the discretion of the decision maker to set the range of alternatives to be considered. How can the decision maker assess the impacts of an action without considering an alternative that includes it? If there is doubt about the level or type of use that might be acceptable, relative to impacts and mandated tolerances, then how can a determination be made without an appropriate range of alternatives? If NPS understands correctly from this comment that the Fund would not find the DEIS "permanently damaged" if there had only been a no-motorized use alternative, then NPS disagrees because of its discretionary authority in setting the scope of analysis. If the Fund relies on NEPA for its opinion that a no-motorized use alternative is required, NPS also disagrees. NEPA requires a "no action" alternative (§1502.14(d)). In this case, since motorized use exists, and was sanctioned in the past under existing rules, policies and plans, "no action" is correctly interpreted as the existing management situation. CEQ directly supports this position. Its opinion is that in instances where ongoing programs are being evaluated, "no action" is "no change" from current management direct or level of management intensity. In these instances, CEQ states: "To construct an alternative that is based on no management at all would be a useless academic exercise (Question 3 of CEQ 40 Most-Asked Questions)."
Page 2. Re: Preferred alternative proposes to prohibit motorized oversnow vehicle access. CEQ Regulations do not stipulate the rationale for selecting a preferred alternative in an EIS. It stipulates that in a final EIS, a preferred alternative must be identified. The statement of preference for one or more alternatives in a DEIS is discretionary, depending upon whether the agency has a preference at that point (§1502.14(e)). The identification of a preferred alternative in a DEIS should be regarded by the public as extremely tenuous. An EIS serves as a means of assessing impacts of proposed agency actions "rather than justifying decisions already made" (§1502.2(g)). The FEIS preferred alternative may be viewed more as a "precursor" decision, which will only become final in a Record of Decision that expresses the rationale for the choice. It is clear that the expression of a preferred alternative, by itself, can in no way invalidate the entire EIS analysis. The decision maker can select any of the proffered alternatives in a Final EIS through consideration of a variety of factors, including but not limited to environmental impacts. The selected alternative does not have to be the most environmentally preferable alternative, which must also be revealed in the decision document.

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Page 3. Re: The contention that the focus on economic impacts in the EIS is both unnecessary and misplaced, and that because of this focus the DEIS does not meet legal standards under NEPA. NPS disagrees. The commenter is undoubtedly aware that the consideration of social and economic impacts is routinely done in any environmental analysis. There are several major reasons for this. First, the scoping process as conducted under §1501.7 inevitably raises the social and economic effects of a proposed action. In many instances, these are regarded as significant issues. Second, the impacts must be considered in the context of society as a whole, the affected region, the affected interests, and the locality (§1508.27(a)). Third, the intensity of impacts on the quality of the human environment must be gauged (§1508.27(b)), where "human environment" is to be viewed comprehensively (§1508.14). Effects (direct, indirect and cumulative) are defined as including both economic and social impacts (§1508.8).
Page 4. Re: Snowmobiling and trail grooming cause significant adverse impacts. As stated in the comment, these impacts are disclosed in the EIS. The commenter cannot reasonably state on the one hand that the analysis is deficient and on the other hand, sufficient. The question is what are the impacts, and at what point do they result in an adverse impact on park values. It is the purpose of the EIS to speak to the magnitude, intensity and duration of the impacts, and it is left basically to the decision maker to determine what constitutes impairment given the context of the situation. Contrary to the assertion of the commenter, the level at which impacts are considered adverse is in dispute until resolved through an FEIS and Record of Decision.
Page 4. Re: Snowcoach use and trail grooming. It is the purpose of the EIS to speak to the magnitude, intensity and duration of the impacts associated with snowcoaches. It is left to the decision maker to determine what constitutes an adverse impact given the context of the situation. Contrary to the assertion of the commenter, impacts on the 3 park units are in dispute until resolved through an FEIS and Record of Decision. It is unreasonable to expect NPS to produce an EIS, which conveys the necessity to evaluate alternatives, and then to state that there is only one alternative because the impacts of all others are on their face prohibitive. This rationale is not effective in proving the DEIS is deficient, and it offers no constructive advice for producing a Final EIS.
Page 5. Re: Human use is secondary to preserving nature. The content of this comment on NPS mandates may also be found in the DEIS, page 2. Issues the commenter lists to show that NPS is not following its mandate are the same issues given in the DEIS purpose and need for action. The intent of the purpose and need for action, and the EIS is to improve the situation that the commenter decries.
Page 6. Re: Winter use mandate. The enabling legislation for Grand Teton National Park recognizes the right of access across Federal lands within the exterior boundaries of the park to state, national forest and private lands. It also recognizes U.S Highway 89 and authorizes the construction of an alternate route within the park to "facilitate public use and enjoyment of the [park]." The act is silent about the use of these or other travel-ways within the park by autos, trucks, buses, bicycles or other forms of transport – summer or winter. By the commenter's logic, there would be at least two highways through GTNP, but no traffic should be allowed on them. The commenter is correct in his statement that winter use is not explicitly or implicitly mandated by Yellowstone National Park's enabling legislation. However, neither does the act mandate implicitly or explicitly that winter access be disallowed. The act does state that the park is set apart as a pleasuring ground for the benefit and enjoyment of the people. The act also allows for the construction of paths and roads and buildings to accommodate visitors, with the overriding criteria that the resources therein be preserved and retained in their natural condition. The fact that buildings and roads may be constructed implies that a certain level of impact is acceptable to allow for access by the public. It is the purpose of this NEPA process to examine just this issue and to provide a meaningful analysis on which to base a sound decision. The acceptable level of impact on park values for all winter uses relates directly to the decision to be made based on the analysis presented in the FEIS.
Page 7. Re: Public use. NPS does not disagree with this conclusion regarding its authority to prohibit uses that cause impairment of natural resources and the enjoyment of those resources by future generations.

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Page 7. Re: Impairment standard. The action referred to in this comment is one that has long been implemented, supported by past policies, rules, and plans. The "no action" alternative is "no change from current management." Granting for the moment the commenter's assertion that said action was not legal at the beginning, NPS cannot just turn back the clock and start over. It must start at the present, assess the true impacts on these parks and proceed accordingly. It should be noted that the attachments to these comments purporting to do not conclusively demonstrate that the resources of the three park units have exceeded an "impairment standard." There are a great number of inferences drawn from general studies, or studies that were undertaken elsewhere. Results are extrapolated to the 3 park units, where conditions or circumstances are not demonstrated in the literature to be applicable. Where some studies of impacts, notably those associated with Mary Meagher, apply directly to park resources (e.g., bison in Yellowstone), the site-specific impacts are presented as rationale to prohibit use throughout the park. With few exceptions such as Meagher's conclusions, there is very little in the literature to provide a solid basis for determining at what point a potential impact becomes an adverse effect on park resources. This is contrary to the commenter's apparent assumption that "impairment standards" are self-evident and agreeable to all. NPS maintains that the standard of impairment can be a function of the criteria used by a decision maker in the record of decision. The latter is a part of the decision to be made.
Page 9. Re: Footnote reference to the CDST and other snowmobile use in GTNP: NPS agrees that it is appropriate to provide more discussion of the CDST in the final EIS.
Page 10. Re: Snowmobile use prohibited if in conflict with the park's values. This comment restates material from the purpose and need for action.
Page 10. Re: Legal basis for grooming winter trails. A true legal basis for drawing conclusions about what is and isn't allowed in the parks begins with scrutiny of the enabling legislation. In this case, reference is made to regulations which are subject to change within the strictures of legislative guidance. The enabling legislation is silent about grooming winter trails, as it is about a great many other facets of modern management. However, to conclude from the absence of regulations (on the practice of grooming) that grooming is unauthorized…. is highly erroneous. There are a great many standard practices and management measures that are not explicitly allowed in the regulations, and it is unreasonable to expect that this should be so. Aside from the question of legal authority for grooming winter routes, NPS has clearly felt for many years that it is within its management authority. The DEIS discloses the environmental impact of this activity.
Page 12. Re: Snowmobiling and trail grooming impact on animal populations. The commenter faults NPS for "conceding" impacts of winter grooming operations on wildlife in the DEIS while failing to take action to remedy the impacts. Since we are engaged in a NEPA analysis, the remedy for any impacts that are disclosed can only come with a decision. Since the decision will not be made until a Record of Decision is published, the criticism is premature. Commenter is getting the cart before the horse. If the criticism is based on NPS' identification of a preferred alternative in the DEIS, then we reiterate the response to comment, "Page 2. Re: Preferred alternative…"
Page 13. As stated in the comment, the impacts on air and water are disclosed in the DEIS. The actions that NPS must take in regard to the impacts goes to the decision to be made.
Page 13. Re: The NPS required to be aggressive in safeguarding air quality. Inventories and monitoring data relating to the condition of air quality and air quality related values are presented in the affected environment portion of the DEIS. The evaluation of pollution impacts by alternative is presented in the environmental consequences section of the DEIS. This analysis will be enhanced in the FEIS using results from air quality modeling.
Page 14. Re: Snowmobiles create substantial amounts of noise. The effects of winter use, in particular sound from motorized vehicles, are disclosed in the DEIS. This analysis will be enhanced in the FEIS using additional monitoring data and results from sound modeling.

[illegible] & ASSOCIATES
Page 15. There has not yet been a determination that snowmobiling and trail grooming are antithetical to preservation mandates. The action referred to in this comment is one that has long been implemented, supported by past policies, rules, and plans (Please see the earlier response to this letter in regard to page 2 "Preferred alternative.") The "no action" alternative is "no change from current management." Granting for the moment the commenter's assertion that said action was not legal at the beginning, NPS cannot just turn back the clock and start over. It must start at the present, assess the true impacts on these parks and proceed accordingly. Impacts that need to be considered includes economic effects. Please see earlier response to this letter in regard to page 3 "The contention…," above. The decision maker must weigh all impacts, and be guided in the end by her or his criteria that would protect the parks for enjoyment by future generations.
Pages 17-18. Re: Executive Order 11644, as amended. The NPS interpretation of Executive Order 11644 is set forth in the NPS policies the commenter cites. Recently, NPS proposed revisions to its management policies and solicited public comment on the revisions. 65 Fed. Reg. 2984. The Service's interpretation of the Executive Order may change following the NPS analysis of public comment on the revised policies. If that occurs before the final EIS or Record of Decision are ready for publication, NPS will include a notice of the change in those documents as appropriate.
Page 18. Re: Groomed routes to facilitate oversnow vehicle use. The commenter has constructed an argument whereby all choices involving any level of motorized use are gone, on the basis of a determination which has yet to be made. Adverse impacts may be associated with both motorized and nonmotorized uses, as disclosed in the EIS. Whether or not an adverse impact is tantamount to *impairment or derogation* of park values is also a function of the magnitude, intensity, duration and context of the impact. This determination of significance, for most resources and park values, is made in the final decision considering impacts disclosed in a final EIS, for a full range of choices. The commenter cannot have it both ways – a sufficient legal process under NEPA and a range of one alternative that is not pre-decisional. Assuming the illegality of an action initiated years ago by the perceived impacts of today is incorrect logic. NPS disagrees and feels that the assumption is wrong, therefore the conclusion drawn from it is wrong. NPS does feel that conditions have changed, and has taken steps for the 3 park units, first in 1990 (Winter Use Plan/EA), then starting in 1994 with a Multi-Agency Assessment, and presently in this EIS to address those changed conditions.
Page 18. Re: Involvement of cooperating agencies. The intent of granting cooperating agency status was in the spirit of cooperation and coordination consistent with NEPA, FACA and APA. The content of the document has been affected, but NPS disagrees that the analysis has been. The document incorporates material from the cooperating agencies, which is reported as a matter of full disclosure even though the results disagree with NPS analysis. Letters from the cooperators and the signed agreements between NPS and cooperators were included in the DEIS, Volume II. These items relate to content. As to inappropriate influence, one need only review media reports, comment letters or other correspondence from the cooperators to obtain their assessment of how they were involved.
Page 20. Re: Involvement of cooperating agencies in forming alternatives. Please see previous comment, immediately above. Cooperating agencies did have a participatory role in alternative development. However, they were not exclusively involved. The process used in the cooperating agency alternatives workshop began with exercises in developing problem statements from the public scoping effort.
Pages 20-21. Re: 2. The analysis of economic impacts. Please see the response to comment, "Page 3. The contention…," above. There is no emphasis from NPS on economic impacts. It would appear that this emphasis might be conveyed by the cooperating agencies, but the document and the process are merely fulfilling NEPA requirements. Also, NPS is not responsible for the economic viability of the surrounding areas, but what NPS might propose to do is certainly an issue which must be addressed in the EIS. For reasons given in earlier in this response, NPS disagrees with the contention that effects analysis for economics is subservient to analysis of ecological impacts. If the commenter truly means that economic impacts are subservient to ecological impacts, such as they are disclosed and understood through the EIS analysis, NPS feels this kind of determination is left to the decision maker.

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Pages 21-22. Re: Cost assessment Appendix F in Volume II of the DEIS describes construction and operation costs by alternative at a level regarded as sufficient for a programmatic EIS and plan (§1508.18(b)(2) and (3)). NPS will review and update this cost analysis for the FEIS, but the commenter has not provided any specific criticisms that can be addressed at this time. NPS will consider providing some additional discussion on environmental costs in the FEIS.
Page 23. Re: Alternative formulation. Please see response to comment, "Page 1" and "Page 2. Re: No snowmobile…" at the beginning of this letter response.
Page 23. Re: The major issues. The major issues are articulated in the DEIS on pages 13-15.
Page 23. Re: Alternative formulation. Please see response to comment, "Page 1" and "Page 2. Re: No snowmobile…" at the beginning of this letter response. CEQ regulations do not stipulate how alternatives are to be formulated. The regulations at §1501.7(a)(2) require the agency to consider public comment from scoping and determine the significant issues – or the issues to be analyzed in depth in the EIS. The regulations at §1502.14 require the agency to develop alternatives that sharply define the issues and provide a clear basis for choice among options. NPS developed significant issues from a broad scoping effort, and the DEIS alternatives respond to these issues in varying ways that allow a comparison of options and their effects or opportunity costs. The formulation of alternatives meets the requirements of the regulations.
Page 23. Re: Consistency with federal law and NPS regulations and policies. Laws, regulations and policies do not, by themselves, drive an action. An identified gap between existing conditions and desired conditions form the basis for the purpose and need for action. The underlying purpose (§1502.13), or goal to be achieved as stated at the scoping stage is to provide a full range of quality winter experiences offered in appropriate settings and having no significant adverse impacts on park values. This purpose is represented by the desired condition shown on page 3 of the DEIS. The underlying need (§1502.13) is defined by the existing conditions expressed on page 4. Despite the complexities introduced by multiple goals and multiple issues, all alternatives represent possible actions that meet the underlying purpose and need. As stated in the DEIS, the desired conditions in this case reflect relevant laws, regulations and policies. A decision maker may set the scope of analysis and the decision to be made within the constraints of those dictates. However, NEPA does not require this. An environmental analysis may evaluate a proposed change in policy, or a decision based on effective analysis may indicate the need for a change in policy.
Page 23. Re: Identification of the decision. The decision to be made will be presented in the purpose and need section of the final EIS.
Page 24. Re: Development of desired conditions. NPS developed the desired conditions, as it is this agency's responsibility to do. The DEIS clearly states that the desired conditions proceed from NPS mandates including legislation, regulations, executive orders, and governing policies. That motorized winter use has been ongoing in these parks since at least 1963, there is some indication that parks' leadership at the time found adequate direction in NPS mandates to allow the use. For reasons also described in earlier responses, it is reasonable to include a goal of motorized access as part of the purpose.
Page 25. Re: Plowing in alternative B. It is the commenter's opinion that plowed road access from West Yellowstone to Old Faithful would drastically and adversely affect wildlife. The analysis in the EIS does not bear out this contention, at least in the sense that the impacts would constitute an impairment or derogation of park values – which goes to the decision to be made. Alternative B, in this regard, is constituted to provide access for a number of visitors, via mass transit, equal to that facilitated by present snowmobile use. The alternative would drastically reduce the number of vehicle miles traveled on this route during the winter, even though the number of visitors could potentially increase.
Page 25. Re: The purpose of the EIS. It is the nature of the decision that is in question. It has been NPS' intent from the beginning of the process to prepare a programmatic plan (§1508.18(b)(2) and (3)). This would be the purpose of preparing a "comprehensive EIS." There should have been no illusions that a plan of this magnitude would be based upon detailed, site-specific data in order to make every decision possible relating to winter use. This programmatic approach is acceptable under the law, in the way that NEPA is the vehicle for producing NPS General Management Plans and USFS Forest Plans, and amendments thereto. Such documents do, in fact, make decisions and allocations at a general level and defer many site-specific types of decisions to a later

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date. In this context, it is also acceptable to spell out processes that would be followed, such as adaptive management, as alternative features. That this is done in two alternatives cannot be construed as a violation of NEPA. It will be up to the decision maker to weigh the available data, the possible impacts of such alternatives in the short term, and decide if park resources and values are sufficiently protected.
Page 26. Re: Conducting scientific studies. See preceding response. Technically, this issue is debatable and it is why NPS is performing NEPA at this time.
Page 27. Re: Grooming. The impacts of grooming are evaluated and disclosed in the DEIS. It is unclear what the commenter is referring to in the statement that substantial impacts of grooming have not in some cases been disclosed. There may be a difference of opinion on the nature of impacts associated with this action.
Page 27. Re: Failure to evaluate a nonmotorized alternative. The adequacy and range of alternatives, regarding the inclusion of motorized use, has been addressed in numerous foregoing responses.
Page 27. Re: Failure to evaluate a nonmotorized alternative. NEPA does not require the detailed consideration of a no snowmobiling, no grooming, or no motorized use alternative. See especially response, "Page 2. Re: No snowmobiles…"
Page 28-29. Re: Alternatives presented by commenter. Five possible "alternatives" are presented by the commenter on these pages. Except for suggested total closures to motorized use or grooming for an entire park, or for timing restrictions that appear to be administratively unviable, many of the alternative suggestions are incorporated within the DEIS alternatives. As such, they are available as choices for the decision maker. Also, the suggested alternatives could at the appropriate time be the result of adaptive management procedures, further study, or recreation capacity determination. NPS takes this opportunity to further address the complexity of alternative formulation in this effort. Many suggestions for alternatives or alternative features were made in the thousands of comments received. A great deal of criticism was leveled at the current range of alternatives because people did not like the way features were "mixed." At the same time, many people focused on features of alternatives that they liked, and features to which they were opposed. It is clear that for such complex issues there could be an infinite number of possible alternatives. CEQ states that in such instances, the agency need only consider a reasonable number of examples that cover the full spectrum of possible alternatives that meet the purpose and need (Question 1b, CEQ 40 Most-Asked Questions). What constitutes a reasonable range depends on the nature of the proposal and the facts in each case, where the proposal is at the discretion of the agency. The final selected alternative that is to be documented in a record of decision may mix features from the range of alternatives evaluated in the final EIS. Such mixing can occur as long as the mixed features are consistent with one another, and as long as the features and their effects would not fall outside the range of alternatives disclosed in the EIS (§1505.1(e)). A finding as to that circumstance would be entirely appropriate in the record of decision, along with the rationale, should the selected alternative not precisely correspond with one of the "mixes" evaluated in detail. This material needs to be explained in a new FEIS section on the decision to be made.
Page 29. Re: 4. The Draft EIS fails to disclose or discuss environmental impacts associated with trail grooming. The DEIS discloses and discusses the environmental impacts of trail grooming for each alternative. Since this activity has relevance primarily for wildlife, its impacts are discussed in the wildlife consequences section for each alternative.
Page 30. Re: Increase in snowmobiles and their impacts. This statement of effects relates more to use by snowmobiles than to effects of groomed surfaces. Effects due to snowmobile use are also disclosed in the DEIS by alternative. The alteration of snowmelt patterns by trail grooming and use and their alleged effect on road surfaces is not a significant issue requiring study in this EIS.
Page 30. Re: Reduction in the rate of snowmelt due to grooming. The impact of groomed surfaces and how they may facilitate the transport of toxins into the aquatic environment is more appropriately addressed by directly speaking to the presence and sources of the toxins. The DEIS discusses this under effects on

SCHUBERT & ASSOCIATES
water resources for each alternative. Additional information has become available (Ingersoll, *Effects of Snowmobile Use on Snowpack Chemistry in Yellowstone National Park, 1998*) since publication of the DEIS, and will be incorporated into the final document.
Page 31. Re: Use of groomed routes by wildlife beneficial. If the issue is the effect of groomed surfaces on the energy balance of individual animals, as is the intent of the DEIS discussion, then groomed surfaces by themselves allow animals to save energy. This is why they use the surfaces, and it is apparently to their benefit. The DEIS also makes the point that recreation use of groomed surfaces contributes to stress and energy expenditures by animals. The larger issue – given the balance of energy savings vs. energy loss – is if and to what extent these circumstances constitute an adverse impact on park resources. The total picture – groomed routes, type and amount of use, stressful periods for wildlife, availability of forage – needs to be considered in the final decision. The goal of natural regulation applies to whole populations, not individuals, and must factor in the presence of people.
Re: All comments on pages 31-41. The commenter relies heavily upon the work of Dr. Meagher to support his opinion that groomed roads have had a major and devastating effect on bison, and that, consequently, natural regulation does not operate on the YNP herd. While work by Dr. Meagher was considered and used in the preparation of the DEIS, as stated on page 166 wildlife biologists disagree on the extent to which bison use roads, and as to the effects of use on population dynamics and movements. Therefore the results of other studies were cited as well. Providing the reader with both opinions fulfills the disclosure requirement in CEQ regulations (§1502.9(a)). A discussion as to the effects of groomed roads on ungulates in general is found on pages 183, (alternative A) and subsequent evaluations of each alternative compare the effects of groomed roads to those incurred under alternative A. Additionally, the conclusion section contained in the discussion of the impacts of each alternative addresses the effects of groomed surfaces on ungulates. The DEIS discloses that groomed surfaces may positively affect the energy expenditures incurred by bison and other ungulates. Furthermore, the cumulative effects of winter recreation and severe weather on wildlife are discussed on pages 166-67 (also see above response). The commenter provides a lengthy literature review about the effects of recreation, in particular groomed roads, on bison and other wildlife species. The major points repeatedly expounded upon are found within the DEIS. Please see the following response as it relates to CEQ requirements for adequate disclosure. NPS will include a few additional citations in the FEIS: Aune (1981) on the ability of bison to habituate to snowmobiles and Moen et al. (1982) on the physiological responses associated with disturbance. Although wolves have been documented to use snowmobile trails, this relationship has not been evident for the wolves tracked in YNP (Smith, pers. comm. 2000). The latter fact will be included in the FEIS and Biological Assessment.
Pages 42-46. The CEQ regulations do not require exhaustive and voluminous discussion, especially when the discussion can be characterized as background and adding needless detail (§1500.4 (f)). The amount of detail to be included in an EIS should be that level which is relevant to the decision to be made, and preparing analytic as opposed to encyclopedic documents (§1500.4 (b)). The regulations recommend page limits on documents, which the draft EIS already exceeds. Finally, the regulation at §1502.21 (Incorporation by reference) requires agencies to incorporate material by reference to cut down on the bulk without impeding agency review. Brevity and incorporation by reference of large amounts of literature in the DEIS, and in the FEIS, does not constitute inadequate disclosure. Work by Dr. Meagher and others was considered and used in the preparation of the EIS. The lengthy discussion of wildlife and impacts on pages 42-46 of the letter, presented as a listing of flaws in the DEIS, is drawn from literature summarized and cited in the EIS.
Pages 46-53. Re: T&E species. First of all, the preparation of a biological assessment (BA) is a requirement of ESA; whether or not formal consultation is required is up to the USFWS upon review of the BA. The commenter implies in Footnote 40 that NPS is negligent in its duty to prepare a BA. A draft BA was prepared and submitted to the USFWS. There is no requirement under NEPA for public review of a BA. Otherwise, 1) Grizzly bears—The FEIS will be amended to include a more thorough discussion of impacts to grizzly bears associated with winter recreation. The NPS does not dispute that carrion is important to grizzly bears in the spring, but it does not agree that multiple pages of literature review (as provided by the commenter) are necessary to support this fact. Furthermore, it is not clear, as the commenter asserts, that indirect impacts associated with the alleged "altered distribution and movement patterns of large ungulates" result in lowered availability and accessibility of carrion. Although some studies have indicated that grizzlies use carrion within 1.5 km of a road or development less than its availability, there has not been shown a causal link between roads, where animals die, and grizzly bear survival as influenced

[illegible] & ASSOCIATES
by lack of carrion. Any disturbance to scavenging bears as a result of roads and developments are alleviated by a YNP policy that closes to the public important spring foraging habitats for grizzlies beginning March 15 (before the majority of bears emerge from their dens) and keeps much of that area closed until Memorial Day weekend. This discussion will be expanded upon in the FEIS and BA. Lastly, the potential indirect effects of air pollution on grizzlies are not supported by data and are consequently highly speculative. Gray wolves—The FEIS will be amended to include a more thorough discussion of impacts to gray wolves associated with winter recreation. Although wolf use of packed snow routes has been documented to occur, this relationship has not been established in YNP. The commenter's contention that groomed routes allow wolves a competitive advantage over ungulates, which are also attracted to the routes, misses the point: wolf habitat is ungulate habitat. Ungulates, regardless of whether groomed routes occur or not, travel to areas of low snow in the winter, i.e., winter range and wolves follow. Lynx—The FEIS will be amended to include a more thorough discussion of impacts to lynx associated with winter recreation, in particular the effects of groomed roads on interspecific competition. Wolverine—The FEIS will be amended to include a more thorough discussion of impacts to wolverines associated with winter recreation. Snowmobile impacts to denning wolverine, however, are not expected to occur because snowmobile routes are not located in wolverine denning habitats, which are generally in high elevation, remote areas.
Page 53, including material through page 56. Re: Analysis of public health. There is a greater amount of final study information available to the NPS for inclusion in the FEIS than was available prior to the publication of the draft. Public health sections will be updated in accordance with this data. Please see response, "Pages 42-46," above.
Page 53, including material on pages 56-59. Re: Analysis of water and aquatic resources. There is a greater amount of final study information available to the NPS for inclusion in the FEIS than was available prior to the publication of the draft. Water and aquatic resources sections will be updated in accordance with this data. Please see response, "Pages 42-46," above.
Page 53, including material through page 56. Re: Analysis of air resources. There is a greater amount of final study information available to the NPS for inclusion in the FEIS than was available prior to the publication of the draft. Air resources sections will be updated in accordance with this data. Please see response, "Pages 42-46," above.
Page 59. Re: Effects on vegetation. The commenter extrapolates from data involving actively photosynthesizing vegetation. Otherwise, statements about impacts on vegetation are too broad to be conclusive about effects on this resource during the winter in the three park units. The question appears to be more about fuel and oil residues deposited in snowpacks, and how that may indirectly affect vegetation during the spring growth season.
Page 60. Re: Polycyclic Aromatic Hydrocarbons. That PAH and other toxic elements are included in emissions from 2-stroke engines is disclosed in the DEIS, page 163 et al. The information in the DEIS will be reviewed and enhanced as appropriate for the final document.
Page 61. Re: Analysis of noise impacts in the DEIS is deficient. Analysis of sound in the DEIS is sufficient in its determinations, by alternative, that winter use activities have adverse impacts on the natural soundscape. Information from Bowlby and Associates was used in the DEIS analysis, but was inadvertently omitted from the bibliography. This will be remedied in the FEIS. Also, additional data has been developed for the sound analysis and will be incorporated into the final document.
Page 61-62. Re: Impacts of non-natural sound on wildlife. Because quantifying the effects of non-natural sound on animals in the wild (as opposed to a controlled laboratory setting) is extremely difficult, NPS believes that analyzing the effects of machine noise on ambient sounds levels is a legitimate substitute (see following response). NPS also believes that the effects of noise on wildlife are inherently included in the overall effects of snowmobiles on wildlife in terms of disturbance. Nonetheless, a review of the impacts of noise on wildlife will be included in the FEIS.
Page 62. Re: Consistency of noise restrictions with NPS regulations. If it were determined beyond speculation that machine noise as it occurs in the 3 park units adversely affects wildlife to a point that it represents derogation of park values, then the restriction would apply. The same is true of possible impacts on aesthetics or experiences of other visitors, although these are disclosed as adverse impacts in the DEIS, and may be more supportable. This issue goes to the purpose and need for action, and to the decision to be made, addressed in earlier response to comments in this letter.

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Page 63. Re: 9. NPS must not rely on survey findings to revise and justify its final strategy and Record of Decision. NPS will continue to use the best information available. As this survey information is reported or cited in the DEIS, the limitations of the survey are made evident. Additional survey information is now available for the FEIS, and those data will similarly be accompanied by assumptions and survey limitations. The data is used to report impacts, primarily those involving visitor experience and social and economic environments. The final strategy, or decision is based on selection criteria used by the decision maker, which are disclosed in the record of decision through discussion of "preferences among alternatives based on relevant factors including economic and technical considerations and agency statutory missions" (§1505.2(b)). Please see the response, "Page 2. Re: Preferred alternative…"
Page 64. Re: Influence on results of Winter Use Survey. See previous response. NPS is aware of this survey factor, and the conclusions drawn from the survey are placed in this context.
Page 64. Re: Purpose. Commenter's statement of how the decision must or must not be arrived at. This goes to the purpose and need for action and the decision to be made. Please see the response, "Page 63. Re: 9," above.
Page 65. Re: New alternative. Commenters put forth new alternative not evaluated in detail in the DEIS. This alternative and the contention that it would be the only a viable alternative consistent with NPS legal mandates are based on premises that NPS does not accept. The completion of the EIS and the final decision are critical to any such determination. "The primary purpose of an environmental impact statement is to serve as an action-forcing devise to insure that the policies and goals defined in the Act [NEPA] are infused into the ongoing programs and actions of the Federal Government (§1502.1)." "The range of alternatives discussed in an [EIS] shall encompass those to be considered by the ultimate agency decision maker (§1502.2 (e))." The purpose and need for action described in the DEIS is sufficiently broad to act as an action-forcing tool. It is within the discretion of the decision maker to set the scope of analysis. Considering that motorized use in the parks is an existing use, not a proposed use, it is logical to frame the purpose and need in terms that would include that use and facilitate an incremental investigation of the impacts of that use. To do otherwise, and to accept the Fund's assertion, would result in a narrow scope of analysis and one viable alternative relative to motorized use. The settlement agreement that resulted in a need to develop this EIS requires a comprehensive evaluation of winter recreation use – the presumption that only nonmotorized use should be considered in light of policy, law, regulation and existing use, is not appropriate. The insistence upon natural regulation comes from a misplaced focus on individual animals rather than populations, and it ignores the bigger picture that people, roads and facilities are located in National Parks and will remain so. Hence, as indicated in the EIS, NPS will not analyze in detail an alternative that removes all oversnow motorized use from the three park units.

SIERRA CLUB
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RECREATION ISSUES COMMITTEE

November 26, 1999

Clifford Hawks
12795 West Alameda Parkway
Lakewood, CO 80228

STATEMENT OF THE SIERRA CLUB - RECREATION ISSUES COMMITTEE,
RE: WINTER USE PLAN: Draft EIS - Yellowstone National Park
prepared by Dick Hingson, PO Box 630132, Rockville, UT 84763

Dear Clifford Hawks:

These comments pertain to the various Natural Quiet and Noise elements within the Draft EIS and its Appendices. (More comprehensive Sierra Club comments are being submitted by the Sierra Club's Yellowstone Ecosystem Task Force separately.)

The Sierra Club's Principles concerning Natural Quiet are similar to NPS' articulation on Page 126, but are elaborated along some additional lines NPS might usefully incorporate within its Final EIS. They are as follows:

PRINCIPLES ON NATURAL QUIET IN NATIONAL PARKS

(I) *The sounds and silences of nature are among the intrinsic elements which combine to form the natural environment. Natural sounds amidst intervals of stillness are inherent components of the "scenery and the natural and historic objects and the wildlife" within National Parks.*

(II) *Visitors to National Park System units have a right to experience all of the natural environment unimpaired. Within units of these Systems, natural quiet – the extended opportunity to experience simply natural sounds amid periods of deepest silence – must be preserved for the enjoyment and inspiration of present and future generations.*

(III) *An important value of our National Parks – not to be lost – is as protected, often vast, places of astonishing beauty and wildness. Each has thereby a distinct and powerful aura, fully dependent upon the oft-subtle natural sounds and the hush. As such, they afford unique opportunities for undistracted respite, solitude, contemplative recreation, inspiration, and education.*

Further, these units also provide scarce refuge and undisturbed natural habitat for animals. Artificial, human-generated noise can interfere with sensitive animal behavior. Such noise also degrades the aura, the special presence of place, with its sense of primeval character and solitude.

Therefore, thrill-seeking and noisy sorts of experiences which disturb the peace are not normally appropriate demands for our National Park or Wilderness Preservation Systems. Those experiences could be provided by the private sector, elsewhere.

We first provide comment on the Volume II Appendices. That lays background for our subsequent emphases re Volume I.

Re: Volume II, Appendix C, Sound and Natural Quiet: NPS Policy Excerpts from NPS Report on Effects of Aircraft Overflights on the National Park System (Report to Congress):

Re the Question (an important one for this Yellowstone plan): *What Is Natural Quiet?*:

(First, this technical note): To include the numbered "Conclusion Cites" for all, not just some paragraphs, would strengthen this portion. This is important for future references.

Thus, the Cite re "Page 78, 'What is Natural Quiet?'" should further key it as "*Conclusion 3.2.1.*" To this, in the Final EIS, furthermore please *add* and *cite* the following key "bullet", taken from *Conclusion 3.4* of the same NPS Report, namely, that the quiet to be preserved/restored is "*the quiet at the lower end of the ambient sound level range that occurs regularly between wind gusts, animal sounds, etc., not just the average sound level.*"

Re: Volume I, Chapter III, Pages 126-129

NPS' "Natural Quiet" section does state important principles and description. *However, it would be greatly improved by drawing upon the extensive scientific research, analysis and literature of the past 10 years at Grand Canyon National Park (GCNP) with respect to natural quiet vs. air tour noise. It could be improved still further through examination of the newly published, detailed studies on ambient natural quiet at Everglades National Park (see References.)*

Various Environmental Assessments, the related Supplemental EA's and Reports from the Federal Aviation Administration (FAA) and NPS–all associated with rulemaking for the aircraft tours at Grand Canyon National Park-- and subsequent NPS ambient sound studies at the Everglades NP, should immediately be reviewed. Their content should suggest how to analyze and map the background natural ambient and audibility thresholds of the motorized impacts on Yellowstone.

Techniques of computerized noise modeling such as those recently "ground-truthed" at GCNP (Report due Spring of 2000) may also be useful in the final EIS for this Winter Use Plan, or in adaptive management later.

Sierra Club disagrees with the implication on Page 129, paragraph 2, that "aviation policies in place" actually "minimize" aircraft overflights of the national parks. At best, they mitigate these intrusions somewhat. These policies are voluntary guidelines only. They are frequently violated by low-flying general aviation, even air tours (!), as at Grand Canyon, Bryce, Canyonlands, and other national parks. High altitude commercial and private jets, and other general aviation, produce plenty of audible noise intruding into many otherwise quiet Western national parks, Yellowstone being no exception. This needs to be acknowledged and scientifically assessed. The substantial amount of aviation noise is *exponentially increasing with the growth of the industry.*

Re: *Background Sound Levels Appear Significantly Over-Estimated.*

Examination of the 1996 Bowlby and Associates Report from Grand Teton NP reveals little systematic product to actually define the "low-end ambient" referred to above. Missing or lost appendices (which exhibit the raw data) further compound the confusion.

The instrumentation appears to likely have been too imprecise or insensitive to accurately measure ambient ranges of 0 to 25 decibels, certainly in comparison to the newly available NPS equipment. Most of the findings for this low-end range appear to be anecdotal or casual. Thus assertions or implication that the natural winter low-end ambient is of the order of 30 decibels simply cannot be taken seriously, given the absence of more systematic studies/analyses such as those carried out recently at the Grand Canyon or the Everglades.

It appears likely from those that the low-end ambient to be protected/restored in winter-season Yellowstone is often much lower: 10 or 15 decibels. Table 16, "Background Sound Level," therefore needs to be re-calculated now and adaptively as more detailed data becomes available. Its title probably also should be changed, to *"Background Natural Ambient"*, and appropriately footnoted. This will reflect the NPS finding of Conclusion 3.4 in its 1995 Report as cited above.

Re: Volume I, Chapter IV, Pages 171 and 172:

The audibility metrics and threshold criteria being introduced at GCNP and the Everglades should be more fully considered for Yellowstone.

Pages 171-172 thus need considerable re-working. "Per Cent Time Audible" (%TA) is a key metric routinely used in the FAA/NPS Grand Canyon environmental assessments, but it has not been demonstratively charted or mapped for Yellowstone with reference to the current deluge of snowmobiles ("No Action"), nor for any other alternatives. *What is the %TA for snowmobiles, or for snow-coaches along the West Yellowstone to Old Faithful route, for example? Or for any other access route, contemplated or actual? How much does %TA increase on peak days, or during peak hours, compared to the average?*

The implication that it was so calculated, in either the Friemund et al. (1997) or in the Borric et al. (1999) studies, appears at best careless. At worst it is a deliberate falsification of the record. Such calculations or charting are *not* published in either report, in any case, certainly not in this draft EIS.

Volume I, Chapter IV, Pages 192-193, Alternative "A", Impacts on Natural Quiet

The natural "low-end" ambience has been *erroneously inflated* to as high as 30 dB. Tables 42-43 thus need to be recalibrated to reflect the actual (lower) ambient The same holds true for Table 47 on Page 214 for Alternative B, and so on. Furthermore, *can %TA now be provided for various sites along, and at various distances from, each snowmobile or snowcoach route?*

Annoyance levels for various levels of %TA and attitudes about natural quiet might better be determined, not mostly from the snowmobile users themselves (as in the Freimund et al studies) but from a cross-section of the people visiting, or who potentially might visit, snow-bound parks (for example, Grand Canyon or Yosemite or Glacier) where snowmobiles are not now admitted. It can be hypothesized that winter snowmobile users (as with summer motorcyclists) would as a whole be less concerned with the *noise* environment of the park, compared with other potential or actual users. The natural quiet thus becomes devalued, to the detriment of others more fully attuned to Yellowstone's uniquely hushed, high-fidelity winter landscape and soundscape.

These remarks do not represent an exhaustive analysis or critique of the problems with the Natural Quiet element in this document. They are, however, illustrative of data that is vague, or otherwise omitted, or mis-stated, or without foundation. Inadequate data or findings potentially can be a disservice to Natural Quiet characterization or protection, thus to the whole aura of this premier Park. Greater precision can be found by drawing upon the recent technical and environmental documentation developed for the GCNP and the Everglades NP. NPS is encouraged to apply these rich data sources, new technology, and analytical insights, to the present Yellowstone analysis of Natural Quiet, and to the impacts of massive, *noisy* snowmobile intrusion thereon.

(Signed) Dick Hingson

Dick Hingson, Vice-Chair
Sierra Club - Recreation Issues Committee

REFERENCES:

1. USNPS (National Park Service, U.S. Department of the Interior), 1995, "Report on Effects of Aircraft Overflights of Units of the National Park System." Washington.

2. Richard L. Ernenwein, "Aircraft Overflights and the U.S. National Park System, An Overview," in "On the Frontiers of Conservation: Proceedings of the 9th Biennial Conference on Research and Resource Management in Parks and On Public Lands," George Wright Society, Hancock, Michigan, 1997

3. William B. Schmidt, "The Protection of the Soundscapes of the South Florida Parks", in "On the Frontiers of Conservation: Proceedings of the 10th Biennial Conference on Research and Resource Management in Parks and On Public Lands," (In Press, due December 1999), George Wright Society, Hancock, Michigan.

4. FAA (Federal Aviation Administration), Supplemental Environmental Assessment, "Special Flight Rules in the Vicinity of Grand Canyon National Park." (And all antecedent Rulemaking Environmental Documents). (In Press, due December 1999)

5. See generally: Joseph Sax, "Mountains Without Handrails: Reflections on the National Parks", University of Michigan Press, Ann Arbor, 1980.

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PAGE

SIERRA CLUB RECREATION ISSUES COMMITTEE
Page 1. Re: Sierra Club's Principles Concerning Natural Quiet. Natural quiet is governed sufficiently by regulations and policies excerpted in DEIS Appendix C. This direction forms a part of the purpose and need for action.
Pages 2. Re: Volume II, Appendix C, include the numbered "Conclusion Cites". Volume II will not be revised.
Page 2. Include addition citations on natural quiet from the Grand Canyon and Everglades. The CEQ regulations do not require exhaustive and voluminous discussion, especially when the discussion can be characterized as background (§1500.4 (f)). The amount of detail to be included in an EIS should be that level which is relevant to the decision to be made, and preparing analytic as opposed to encyclopedic documents (§1500.4 (b)). The regulations recommend page limits on documents, which the draft EIS already exceeds.
Page 3. Re: Acknowledge and assess the real effect of aircraft on the parks. Aircraft effects are considered in the cumulative impact analysis on parks. They are not the focus for study in the winter use EIS.
Page 3. Re: Credibility of Bowlby study. New information is now available on sound and will be incorporated into the FEIS.
Page 3. Re: Recalculate background sound level (Table 16). New information is now available on sound and will be incorporated into the FEIS.
Page 3. Re: Use %TA for sound analyses. New information is now available on sound, including %TA, and will be incorporated into the FEIS.
Pages 4. Re: NPS implies that %TA was calculated in Borrie et al. (1999) or in Friemund et al. (1997). There is no implication intended. The sound analysis will be updated in the FEIS.
Page 4. Re: 1.) "Low-end" ambience is erroneously inflated in DEIS. 2.) Can %TA now be provided? New information is now available on sound, including %TA, and will be incorporated into the FEIS.
Page 4. Re: Survey regarding attitudes about natural quiet was biased. NPS clearly states the parameters of the surveys. NPS also indicates (DEIS pages 153-154) that natural quiet, as defined by solitude and an expectation of hearing the sounds of nature, are among the most important reasons that people visit national parks.

Yellowstone Ecosystem Task Force of the Sierra Club
P.O. Box 263, Jackson, Wyoming 83001

November 30, 1999

Clifford Hawkes
National Park Service
12795 West Alameda Parkway
Lakewood, CO 80228

RE; Winter Use Plan (DEIS) for the Yellowstone and Grand Teton National Parks and John D. Rockfeller, Jr., Memorial Parkway

Dear Mr. Hawkes:

Please accept the following comments on behalf of the Yellowstone Ecosystem Task Force (YETF) of the Sierra Club. YETF is a committee formed by the Northern Rockies, Montana and Wyoming Chapters of the Sierra Club. The national organization of the Sierra Club has 593,000 members that enjoy our public lands and expect balanced management from our public land's agencies and managers. Our goal is to help ensure protection of watersheds, biodiversity, air and water quality, and ecosystem viability. Through the YETF, we are committed to the biodiversity and viability of the Greater Yellowstone Ecosystem, and as such, strongly support *The Citizens' Solution for Winter Access to Yellowstone*.

The Draft Environmental Impact Statement for Yellowstone (YNP) and Grand Teton (GTNP) National Parks and John D. Rockfeller, Jr., Memorial Parkway (JDRP) examines seven Alternatives (A-G) for Winter Use. Of these Alternatives, the National Park Service (NPS) has selected Alternative B as the Preferred Alternative. In reviewing all the Alternatives, we recognize the effort made by the NPS to please all parties concerned. However, it appears that by doing so, the NPS has failed to address the problems of winter visitation on the wildlife and natural resources in the Greater Yellowstone Area (GYA) that may have caused long lasting negative impact. Unfortunately the NPS's proposal to plow the road from West Yellowstone to Old Faithful will cause additional obstacles to wildlife and greater expense for taxpayers. The NPS proposal will transfer snowmobile pollution, noise, and congestion to other road segments while adding automobiles to the mix. The NPS preferred Alternative B fails to address visitor carrying capacity in winter, the impact on wildlife, and does little to protect the unique natural values of the GYA, one of, if not the only, remaining intact temperate ecosystems on earth.

Our comments will be based on the seven major issues as determined by the NPS from scoping, public comment and issues addressed in the DEIS. These issues are; visitor use and access, visitor experience, air quality, snowmobile sound, human health and safety, social and economic impacts, and natural resources. Our primary focus in these comments will be air quality and snowmobile sound/noise.

Visitor Use and Access

We applaud the NPS in their Alternative B for utilizing public transportation for access to Yellowstone National Park from West Yellowstone to Old Faithful. However, we do not think that plowing the road from West Yellowstone to Madison and Old Faithful is the correct method for winter access. The plowing of the road is an unnecessary expense for a Park Service who needs to use funds to fix the past problems caused by years of neglected infrastructure. Also, Alternative B relocates the current overused access by snowmobiles to other areas of the Park particularly the South Entrance. This form of access by snowmobiles will have a greater impact than stated by the DEIS on GTNP and JDRP. It is imperative that a winter carrying capacity study be funded and completed before increased activity by motorized and non-motorized forms of transportation is considered in less traveled areas of the GYA. A winter carrying capacity must be established to protect wildlife and natural resources and is a mandate of the Park Service as established by ..."the NPS Organic Act (16 USC 1, 2-4) and the General Authorities Act (16 USC 1a-8), which directs the agency to protect park resources and provide for the enjoyment of those resources in a manner that leaves them unimpaired for future generations." Is individual motorized use leaving the park resources unimpaired? We do not believe it is, given the amount of air, water, and noise pollution caused by these vehicles.

We support public transportation for winter access and would support the use of scheduled snowcoaches for oversnow travel from West Yellowstone, Mammoth, and Flagg Ranch. The snowcoaches should be newer, cleaner burning and less noisy models than those allowed in the past. This will add to the enjoyment of visitors to the Park. Through the use of snowcoaches, visitors will have continued access to Yellowstone National Park in winter, by way of one vehicle, multi-person occupancy that allows for opportunities to view scenery and wildlife, opportunities to experience quiet and solitude, and the educational experience of winter in Yellowstone through information programs as part of the snowcoach tour. We also support limits to off-trail backcountry use by skiers and snowshoers where wildlife need additional protection. *The Citizens' Solution for Winter Access to Yellowstone* addresses these access issues.

Under Alternative B in GTNP, we support auto entry at Moose and Moran to access the Park. Since these routes are in close proximity to US Highway 89 north of Jackson, this form of access makes sense. We support discontinued use of the Inner Park Road for snowmobile use. This area includes the Potholes and Signal Mountain. We support the phase out of snowmobiles on Jackson Lake. However, this should happen immediately, as this is an inappropriate use for Jackson Lake. What about the use of snowplanes on Jackson Lake? Will this also be phased out? We do not support moving the Continental Divide Snowmobile Trail (CDST) on the section from Moran to Flagg Ranch. Previously the Park Service stated that providing a separate corridor for the CDST was an inappropriate use and would have impacts to natural resources. We agree! Do not move the trail. In fact, we recommend that the CDST be closed in GTNP and JDRP. The proposal to pave a relocated section of the CDST and treat it like a bicycle path in other seasons is inappropriate, as it would not tie into any other bicycle path and the majority of present bicycle use is in the southern portion of GTNP. We do not support an ungroomed motorized trail near Shadow Mountain north to Triangle X Ranch and out to Highway 89. Also, the ungroomed section of the Moose/Wilson Road from the JY Ranch to Granite Canyon Trailhead should be for non-motorized travel only. This viewpoint is in agreement with the Greater Yellowstone Coordinating Committee's report recognizing the need for quality front country non-motorized experience for skiers, snowshoers, and dogsledders. We do not support allowing any new permanent structures such as warming huts at Jenny Lake, Signal Mountain and Two Ocean Lake. We do not support further development of winterized lodging accommodations and fuel services in GTNP.

Visitor Experience

Visitor experience data provided in the DEIS is more heavily weighted toward the snowmobile enthusiast than other users. This is understandable given the present day use of the Parks. However, is this a valid survey and should it carry as much weight as the other seven major issues? Since the DEIS was in response to a suit brought against the Park Service because of trail grooming in winter, and the fact that the majority of respondents to surveys you cited were users of the groomed trails, it appears that the survey results are not as appropriate in determining winter use as are air quality, noise, natural resources, and human health and safety. Have additional surveys been conducted to a wider audience more recently than those cited in the DEIS? Having stated this position, we find that the visitor experience revealed interesting results. "YNP visitors reported gaps between importance of several characteristics of their visit and the degree of satisfaction with the experience for that characteristic." The characteristics showing the largest gap are tranquility, peace and quiet, and getting away from crowds. If human visitors feel this way, what is the impact on the wildlife? This is a question which is not answered by the DEIS.

The Preferred Alternative B advocates the plowing of the road from West Yellowstone to Old Faithful. The number one reason to visit Yellowstone as stated in Table 31 and Table 32 in Chapter III of the DEIS is to view scenery and observe scenic beauty. " Plowing the road from W. Entrance to Old Faithful would create berms of snow that would detract from scenery viewing opportunities." The snow berms would also create a tunnel effect possibly trapping wildlife on the road. Finally, at the end of the visitor experience, Chapter III, it states, "Clean Air is important to most visitors surveyed. This is support by past national survey results that indicate recreating Americans most highly value clean air in their visits to public lands."

Air Quality

YNP is a Class I quality air shed. Air quality is legally addressed in the GYA under the Clean Air Act, the Organic Act of 1916, and NPS Management Policy. As documented below, the excessive pollution of two-stroke engines is clearly prohibited under each of these laws or policies. The use of two-stroke engines in national parks, in the form of snowmobiles, is extremely questionable and is being examined by the NPS and the General Accounting Office.

According to National Park Service Policy 4:17, NPS Policy seeks to perpetuate the best possible air quality in parks "because of its critical importance to visitor enjoyment, human health, scenic vistas, and the preservation of natural systems and cultural resources." NPS Management Policies further states, "[In] cases of doubt as to the impacts of existing or potential air pollution on park resources, the Park Service will err on the side of protecting air quality and related values for future generations." "These policies require managers to assume an aggressive role in promoting and pursuing measures to safeguard air quality and related values from the adverse impacts of air pollution." (NPS, 1999)

The NPS is mandated through both its own 1916 Organic Act (16 U.S.C. 1), the Clean Air Act (42 U.S.C. 7401 et seq) and Executive Order 12088, as amended, to protect air quality in National Parks. This Executive Order requires the head of each executive agency to ensure that all necessary actions are taken for the prevention, control, and abatement of environmental pollution (at 1-101) to submit a plan for the control of environmental pollution to the OMB annually, and to "ensure that sufficient funds for compliance with applicable pollution control standards are requested in the agency budget." (Id at 1-501.)

Section 176 of the Clean Air Act states, "No department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve, any activity which does not conform to an [state] implementation plan... [T]he assurance of conformity to such a plan shall be an affirmative responsibility of the head of such department, agency or instrumentality." Specifically addressing the NPS, the Clean Air Act states "the NPS, as a federal land manager, has an affirmative responsibility to protect air quality related values, including visibility, from the adverse effects of air pollution in areas that are designated as Class I." There are 48 Class I areas that are part of the NPS. Congress intended that these areas be afforded the greatest degree of air quality protection and specified that only very small amounts of air quality deterioration from new or modified major stationary sources is permitted. One of the purposes of this "prevention of Significant Deterioration (PSD)" program is "to preserve, protect, and enhance the air quality in national parks." (42 U.S.C. 7401 et seq.) Additionally, any action taken by the NPS, a Federal entity, must conform to state plans to achieve and maintain national air quality standards.

Clearly, federal actions must not cause or contribute to new violations, increase the frequency or severity of existing violations, interfere with timely attainment of maintenance of any standard, delay emission reduction milestones, or contradict State Implementation Plan requirements.

Currently, there are no federal laws regulating snowmobile exhaust. The typical snowmobile uses a two-stroke engine that produces high emissions of carbon monoxide

(CO), unburned hydrocarbons (UHC), particulate material and a variety of gases classified as "air toxics" such as formaldehyde, and VOCs such as benzene. Snowmobiles don't use any pollution control equipment. The emissions are significantly higher than present-day automobiles and can concentrate in areas having cold and stable air.

Exposure to air pollutants, such as those listed above, is associated with numerous effects on human health. Those effects range from impairment of visual perception, manual dexterity, learning ability, and performance of complex tasks to headaches, fatigue, respiratory failure, and even death. Health concerns that are most commonly raised within the Park are related to smoke and vehicle emissions. Over 1200 letters of complaint were received by YNP in 1993 and 1994 relating to issues of employee and visitor health and excessive snowmobile pollution. During the winter of 1998-9 Yellowstone saw 63,000 snowmobiles enter the park, with nearly 54,000 visitors traveling on the corridor between West Yellowstone and Old Faithful (Flores and Maniero, 1999).

Snowmobiles are exponentially more polluting than automobiles for several reasons:

1) Every stroke of the piston in a two-stroke engine is a power stroke. Within a fraction of a second, the exhaust is vented and new gas, oil and air are brought in. Because both the exhaust and intake port are open at the same time, 25-30% of the raw fuel and oil is wasted and enters the environment with the exhaust.

2) Snowmobiles dump unburned fuel into YNP, GTNP and JDRP snowpacks every winter. In YNP, snowmobiles dump more than 50,000 gallons of unburned fuel into the snowpack. This is the equivalent of 5 tanker trucks of fuel spilling their loads in the park each winter. (Sources: Montana Department of Environmental Quality, 220,000 gallons of fuel were sold for snowmobile use within the park in the winter of 1995; Environmental Protection Agency, two stroke engines emit 25-30% of fuel unburned out the tailpipe in exhaust.)

3) Snowmobiles impair the Parks' air quality. One snowmobile emits 225 times more carbon monoxide than an automobile. One snowmobile emits 1000 times more hydrocarbons than an automobile. (Sources: National Park Service, snowmobile numbers and duration of visit from West Yellowstone to Old Faithful; International Snowmobile Industry Association, emissions levels and horsepower; Environmental Protection Agency, load factor, automobile emissions levels) Recent US Environmental Protection Agency (EPA) data shows that new automobiles emit over 3,000 times fewer hydrocarbons and nearly 600 times less carbon monoxide than modern snowmobiles.

4) Snowmobiles damage visitor and employee health. The highest carbon monoxide levels in the nation were recorded at Yellowstone's West Entrance during winters in the 1990s. The Park Service must pump fresh air into entrance booths to curb employee headaches, dizziness, throat irritation and nausea. (Source: Montana Department of Environmental Quality; Environmental Protection Agency; National Park Service)

By allowing snowmobiles to continue use in the GYA under the Preferred Alternative B, the Park service puts at risk our Class I air shed. Mike Finley, YNP Superintendent, states in an article in the Jackson Hole News dated October 27, 1999, "Yellowstone's air must be kept clean." He goes on to say that, "We are a class one area, like wilderness. Snowmobiles are not allow in wilderness." Later in the article, "Under park management policies, all national parks must protect clean air. Mr. Finley reiterates the policy mentioned earlier, "In cases of doubt as to the impacts of existing or potential air pollution on park resources, the Park Service will err on the side of protecting air quality and related values for future generations." He goes on to state in an opinion article he wrote for the Jackson Hole Guide on November 10, 1999 on why the information on the Air Resources Division of the National Park Services report is important, " The first reason involves human health. These new studies give us reason to wonder if park visitors' health may be affected by high levels of emissions during their trip into Yellowstone, not to mention the quality of experience from the visual effects and noise." He wrote, "These studies indicate that we are not meeting the intent of these laws." The laws in question are the 1916 Organic Act (16 U.S.C. 1), the Clean Air Act (42 U.S.C. 7401 et seq) and Executive Order 12088.

From a Sunday, November 14, 1999 editorial in the San Francisco Chronicle, "A weekend of snowmobiling creates more air pollution in the park than a year of automobile traffic. Some days at the west entrance, where snowmobilers congregate, the air is so befouled with exhaust that oxygen is pumped into the ranger booth to protect the health of park employees." In the DEIS it states, "...YNP and GTNP began to study snowmobile emissions and found that CO and particulate matter (PM) concentrations were high enough to cause health and air quality concerns." In some cases, 2-minute average CO concentrations were measured in ranges of 0.1 ppm to 110.0 ppm. The high concentrations have been shown to impair psychomotor functions. Park employees are being subjected to high concentration of CO and PM. Even snowmobilers riding in groups may also suffer effects of the emissions from snowmobiles. This is a definite health hazard as well as a polluting of our National Park. Not only is air quality being compromised, water quality is also in danger from discharge from two-stroke snowmobile engine. This was cited in a 1974 report by Adams and another 1974 report by Ferrin and Coltharp. Has the Park Service been negligent in protecting the GYA? Also, if pollutants affect humans, the Park Service must address the affect on wildlife.

Because of (1) increased snowmobile use, (2) the amount of harmful pollutants, and (3) because snowmobiles are unregulated, the Park Service must mitigate or eliminate impacts to air quality. Currently there exists no means to mitigate these effects. Fortunately, the means to eliminate them does exist. Snowcoaches currently used in the GYA use four-stroke engines providing oversnow access. This mode of access must replace that of 2-strokes motorized access. Converting winter recreational transportation in YNP and GTNP and the JDRP would accomplish the desired conditions the park service seeks in this planning process, those being air quality, noise reduction and reduction in vehicle numbers.

Current air quality degradations within the parks warrant strong action, which is not adequately reflected, in the preferred alternative. There is no defensible rationale for not preferentially utilizing available four-stroke technology in national parks, and eliminating extremely polluting two-stroke modes of access.

Snowmobile Sound / Noise

In an editorial written in the Salt Lake City Tribune on Tuesday, November 16, 1999, it states, "Preserving a national park's pristine and quiet nature by banning snowmobiles is not a revolutionary idea; the park service already does it in Glacier and Yosemite. Given three decades of evidence of the disturbance these machines have caused, there would seem to be even more justification to ban them at Yellowstone. Natural Quiet, "An important part of the mission of the NPS is to preserve or restore the natural soundscapes associated with national parks. The natural soundscapes (also called natural quiet) are unimpaired sounds of nature, and are among the intrinsic elements that combine to form the environment of our natural parks." On the paragraph on Natural Quiet on page 126 of the DEIS, it states, "Natural sounds are slowly and inexorably disappearing."

Parks and wildernesses offer a variety of unique, pristine sounds not found in most urban or suburban environments. They also offer a complete absence of sounds that are found in such environments. Together, these two conditions provide a very special dimension to a park experience... Quiet itself, in the absence of any discernible source, especially man-made, is an important element of the feeling of solitude. Quiet also affords visitors an opportunity to hear faint or very distant sounds such as animal activity, waterfalls, etc. Such an experience provides an important perspective on the vastness of the environment in which the visitor is located, often beyond the visual boundaries determined by trees, terrain, and the like... In considering natural quiet as a resource, the ability to hear clearly the delicate and quieter intermittent sounds of nature, the ability to experience interludes of extreme quiet for their own sake, and the opportunity to do so for extended periods of time is what natural quiet is all about.

The preceding paragraph is from the conclusion of a 1995 National Park Service report on the effects of Aircraft overflights on the NPS. This report also refers, in section 3.3 of its Conclusion, to five important facts that are to be considered when dealing with natural quiet:

1) Natural quiet is a resource for preservation within the NPS mandate.
2) The human auditory system is an excellent mechanism for determining the presence or absence of natural quiet. No available electronic device can duplicate human hearing for identifying audible sounds produced by non-natural sources.
3) The difficulty of preserving natural quiet is directly related to how quiet it is
4) Humans are not always aware of sounds that are audible
5) Park settings can provide levels of natural quiet so quiet that there is no sound to be heard except that generated by the listener - the sounds of walking, breathing, heart pumping, and blood flowing.

Section 3.3 of the same report goes on to say "The quiet afforded in park settings is virtually in a range of its own, well below that which we experience in our normal daily routine." Section 3.4 of the report states "the quiet to be preserved (and restored) is the quiet at the lower end of the ambient sound level range that occurs regularly between wind gusts, animal sounds, etc.... not just the average sound level."

The NPS Management Policies of 1988 (chapter 1, pages 3-4) state "The individual parks ... have intangible qualities such as natural quiet, solitude, space, scenery, a sense of history, sounds of nature and clear night skies that have received congressional recognition and are important components of people's enjoyment of parks. These NPS Management Policies use the terms resources and values to mean the full spectrum of tangible and intangible attributes for which parks have been established and are being managed.

These NPS Management Policies recognize that all parks are complex mixtures of values and resources, each with its own unique qualities and purposes, each requiring specific treatment in the development and implementation of management strategies and operational plans... The word 'unimpaired' plays an important role in the conservation of resources and providing for present-day public enjoyment. Both physical resources, such as scenic vistas and solitude, may be impaired... It is NPS policy to treat potential impairments in the same manner as known impairments."

The NPS Management Policies (chapter 4, page 17) goes on to say "The National Park Service will strive to preserve the natural quiet and the natural sounds associated with the physical and biological resources of the parks (for example the sounds of the wind in the trees or of waves breaking on the shore, the howl of the wolf, or the call of the loon). Activities causing excessive or unnecessary unnatural sounds in and adjacent to parks... will be monitored and action will be taken to prevent or minimize unnatural sounds that adversely affect park resources or values or visitors' enjoyment of them."

Snowmobile use has led to inescapable noise throughout YNP, GTNP and JDRP. The effect of this noise is stress to winter-worn wildlife and, to other visitors, the loss of the stillness, solitude and natural quiet that they came to enjoy.

The Preferred Alternative B falls far short of the mark in attempting to mitigate the problems of noise in both YNP and GTNP and, if implemented, would appear to be in violation of the Park Services' own Management Policies as they apply towards noise. The selection of a 70dB level for sound seems to be quite arbitrary, is not "strict" in any sense of the word, and will not come close to satisfying the NPS Management Policies. The timelines in the preferred alternative are also far too long to adequately address the noise issue. The problem can and should be dealt with in a much more aggressive manner. Two to three years is more than adequate to implement changes. Ten years is far too excessive.

A finer point of noise measurement must be considered here as well. That is that when dealing with decibels, two sources emitting an equal sound level, say 70dB for example, will produce a combined 73dB output. Noise levels are measured on a logarithmic scale such that for every 3dB rise the sound energy is doubled. Thus the noise level given off by a pair of snowmobiles will actually be double that of the 70dB level. It is hard to fathom how the Park Service would be in compliance with its own policies (referred to in the preceding paragraphs) under these conditions.

We disagree with the statement on Page 129 that "there are aviation policies in place to minimize aircraft overflights of the national parks." These policies are voluntary guidelines only.

We also question the Existing Sound Environment section on page 128-129 including Table 16, wherein the background sound levels in the parks are reported to be 25-34 dB. Is the equipment used in the Bowlby study able to measure low-level ranges of sound? Were valid (and accepted) scientific methods used to determine these reported background levels? We feel that the Park Service should use a more systematic study, such as those done recently in Grand Canyon or Everglades Parks, to establish accurate natural ambient backgroud sound levels.

The Grand Canyon environmental assessments use a metric known as Percent Time Audible (%TA). What is the %TA for snowmobiles or for snowcoaches along the road from West Yellowstone to Old Faithful? What are the ranges of the %TA in the parks? Is there any published data associated with this DEIS regarding %TA metrics?

Annoyance levels for various levels of %TA, and attitudes about natural quiet would be better determined from a greater cross-section of POTENTIAL winter time park users. There are a lot of people who refuse to use the park due to the snowmobile situation and this is not reflected in this data. It is not a stretch to assume that snowmobile users would not be as concerned about noise levels as perhaps someone more in tune with the natural quiet who may wish to visit the park but is forced to seek their solitude elsewhere due to the current situation in YNP and GTNP.

Only the plan outlined in *The Citizens' Solution* to YNP and GTNP Winter Use, with its reliance on mass-transit systems featuring quieter snow coaches, will effectively deal with the noise that has been allowed to spread throughout these parks.

Human Health and Safety

Human Health and Safety issues have been discussed above from inhalation of pollutants from two-cycle engine of snowmobiles and the possible infraction of air quality standards. Other issues addressed by the Preferred Alternative B should be addressed in any alternative, especially hours of travel allowed in the Parks. With snowcoach travel only under *The Citizens' Solution*, schedules should be published and adhered to. Daylight only travel would protect wildlife and add to human safety. This would also protect the park resources in enforcement, reservations at lodges and backcountry permits. We agree with most of the human health and Safety measures put forth by the Alternatives except for the CDST. We advocate closure of this trail in GTNP and JDRP.

By closing the CDST, auto/snowmobile conflict will be resolved. We also advocate the closure of the East Entrance. This entrance is used by less then 3% of winter visitor. Because of the possible avalanche conditions and the need to use military explosives for avalanche control, a use not in keeping with the purpose of national parks, we request that the Park Service close the East Entrance. Finally, wildlife health and safety should be recognized in any alternative. We fully agree that backcountry travel should be limited to established trails and not be allowed into critical winter habitat. The Park Service will need to educate all winter visitors on health and safety issues for humans and wildlife.

Social and Economic Impacts

Social and Economic impacts are identified in the DEIS with the help of the cooperating agencies, the counties surrounding the GYA. The Park Service has recognized the impact the Winter Use Plan would have on the surrounding communities but through the Preferred Alternative B, have pleased none of the cooperating agencies. The surrounding counties are proposing a Revised Alternative E that would alleviate any social and economic impact to their communities. The Preferred Alternative would have a major impact on West Yellowstone because of the number of snowmobile concessions and the fact that they advertise themselves as the "Snowmobile Capitol of the World." The Jackson area would also be impacted because of the increased snowmobile traffic that may/will use the South Entrance to enter Yellowstone on a single user motorized vehicle. In the DEIS on page 89, it is estimated that the expenditures generated in the GYA by nonresidents visiting the parks in winter months is $60 million. With a total annual output of $12.7 billion in the GYA, the winter economy represents only 0.5%. This is a minor affect to the economy as a whole. It is understood that West Yellowstone's winter economy represent 20% of their annual revenue.

The Citizens' Solution recognizes the social and economic impact on surrounding communities. With access still viable by snowcoach, the economic impact should be minor while the snowmobile outfitters either change to snowcoach providers or revamp their businesses to recreation outside of the national parks. This is already happening in West Yellowstone and Jackson through use of the surrounding national forest. However, this can have a negative impact to the surrounding public lands, these public lands users and wildlife. It should be addressed cooperatively and proactively by all the public lands managers in the GYA, not left without adequate planning as has snowmobile and visitor use in YNP, GTNP, and JDRP.

By allowing snowcoach travel into the YNP and the present auto restriction in GTNP, access for visitors are still available and affordable. As criteria for any plan, *The Citizens' Solution* meets those criteria.

Natural Resources

Finally, we request that the Park Service determine the winter visitor carrying capacity of the GYA to determine the social and economic impact on the parks in future years.

This winter carrying capacity is also needed to address Natural Resource management of the Parks. We advocate the following in respect to natural resources:

1) Protect natural resources for the benefit of all Americans and for future generations
2) Continue studies on impact of winter use to natural resources. Protect those natural resources when necessary with selected closure of areas if necessary.
3) Restrict non-motorized use in important winter range
4) Restrict oversnow motorized travel to snowcoaches that meet stringent air quality standards
5) Eliminate motorized use on Jackson Lake
6) Allow non-motorized travel only on groomed trials in frontcountry
7) Manage winter use to the benefit of wildlife and natural resources
8) Establish grounds for cooperating agency status.

We, the members of the Yellowstone Ecosystem Task Force, the Northern Rockies Chapter, the Montana Chapter, and The Wyoming Chapter of the Sierra Club join in with 13 other organizations representing 2.7 million members endorsing *The Citizens' Solution for Winter Access to Yellowstone*.

In addition to emphasizing snow coach access, *The Citizens' Solution* will:

1) Require a study to determine the winter carrying capacity in YNP and GTNP so that the Park Service can strike a better balance between protection of park resources and providing visitors with a quality park experience

2) Limit off-trail backcountry use by skiers and snowshoers in places where wildlife need additional protection

3) Discontinue the Continental Divide Snowmobile Trail in GTNP

4) Close YNP's east entrance road where expensive avalanche control efforts involve military explosives that are not in keeping with the purpose of national parks

5) Encourage further research on the needs of wildlife wintering in YNP and GTNP

Thank you for the opportunity to comment on the Winter Use Plan DEIS. Please keep us informed on any plans affecting the GYA.

Sincerely,
Yellowstone Ecosystem Task Force of the Sierra Club

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Page 1. Re: Support Citizen's Solution. Expressions of support or objection to specific alternatives or alternative features will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision.
Page 1. Re: Against alternative B. See previous response. Partly in response to the overall non-support of plowing the road from the West Entrance to Old Faithful, NPS expresses a new preferred alternative in the FEIS. This alternative would provide mass transit oversnow motorized access from West Yellowstone to Old Faithful, and allow visitors to experience the park by snowcoach.
Page 2. Re: Support mass transit. See previous responses.
Page 2. Re: Alternative B will result in greater impacts from snowmobiles than stated in the DEIS. NPS disagrees. However, it will be up to the decision-maker to weigh the available data, evaluate the possible impacts of each alternative, and decide if park resources are impaired. The impacts in question are not on their face indisputable, and it is the function of an EIS to focus the issues by addressing those impacts as well as possible.
Page 2. Re: NPS must establish carrying capacities for winter use. Setting a carrying capacity is a highly complex and potentially divisive exercise. NPS managers decided there was not enough time available in the settlement time frame to devote to this type of analysis. However, numbers of users is recognized as an element of any impacts associated with winter use, so determining use numbers must be a part of the eventual solution to be reached under any alternative. Incorporating this as a common feature is a necessity. NPS is developing visitor use scenarios for each alternative that will be the basis for a more quantified effects analysis and for mitigation. Some mitigation will be in the form of interim use limits pending carrying capacity analysis. More explanation of the carrying capacity issue will be included in the FEIS.
Page 2. Re: Cite acts pertaining to resource protection and belief that NPS is in violation due to impaired resources. Laws, regulations and policies do not, by themselves, drive an action and the impacts in question are not on their face indisputable. It is the function of an EIS to focus the issues by addressing those impacts as well as possible. An identified gap between existing conditions and desired conditions form the basis for the purpose and need for action. The underlying purpose (§1502.13), or goal to be achieved as stated at the scoping stage is to provide a full range of quality winter experiences offered in appropriate settings and having no significant adverse impacts on park values. This purpose is represented by the desired condition shown on page 3 of the DEIS. The underlying need (§1502.13) is defined by the existing conditions expressed on page 4. Despite the complexities introduced by multiple goals and multiple issues, all alternatives represent possible actions that meet the underlying purpose and need. As stated in the DEIS, the desired conditions in this case reflect relevant laws, regulations and policies. A decision maker may set the scope of analysis and the decision to be made within the constraints of those dictates; however, NEPA does not require this. An environmental analysis may evaluate a proposed change in policy, or a decision based on effective analysis may indicate the need for a change in policy.
Page 2. NPS expresses a new preferred alternative in the Final EIS that contains features supported by the commenter. For example, it would provide mass transit oversnow motorized access from West Yellowstone to Old Faithful, and would restrict access in certain wildlife winter ranges. Expressions of support or objection to specific alternatives or alternative features will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision.
Page 2. Re: Support certain features of alternative B for GTNP. The features that the commenter supports are contained within the new preferred alternative described in the FEIS. Please see preceding response.

Pages 2-3. Re: Do not support a separate trail for the CDST in GTNP, do not support oversnow motorized use on the Moose-Wilson Road, do not support additional warming huts or further development. Please see preceding response to this letter in regard to page 2 "Support certain…"). The new preferred alternative described in the FEIS prohibits snowmobiles in the parks.
Page 3. Re: Validity of visitor survey data in DEIS. As this survey information is reported or cited in the DEIS, the limitations of the survey are made evident. Additional survey information is now available for the FEIS, and those data will similarly be accompanied by assumptions and survey limitations. The data is used to report impacts, primarily those involving visitor experience and social and economic environments. This is entirely appropriate under NEPA. The final strategy, or decision is based on selection criteria used by the decision maker, which are disclosed in the record of decision through discussion of "preferences among alternatives based on relevant factors including economic and technical considerations and agency statutory missions" (§1505.2(b)).
Page 3. Re: The DEIS does not disclose the impacts of snowmobiles on wildlife. NPS disagrees. The DEIS discloses impacts from snowmobiles on wildlife for every alternative.
Page 3. Re: Tunnel effect caused by plowing the road will not benefit wildlife or visitors. Although the DEIS does not use the term "tunnel effect" it does discuss the negative impact associated with snow berms along the plowed road corridor, and suggests mitigation for wildlife (p. 209). NPS and the commenter disagree on whether or not such a tunnel effect would result from plowing. In many other areas within the three park units, roads are plowed and no tunnel effect exists.
Page 4. Re: Cite numerous laws by which the NPS must comply. NPS is fully aware of the laws by which it must abide and fully intends to comply with these laws.
Page 5. Re: Statement of effects for air quality. There is a greater amount of final study information available to the NPS for inclusion in the FEIS than was available prior to the publication of the draft. Air resources sections will be updated in accordance with this data including results from air quality modeling
Page 5. Re: Statement of effects for snowmobile emissions exposure. The emissions analysis will be more comprehensive for all alternatives in the FEIS and a discussion of limiting emission levels will be addressed in the FEIS under the context of setting carrying capacities.
Page 6. Re: Support snowcoaches over snowmobiles. Expressions of support or objection to specific alternatives or alternative features will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision. The new preferred alternative described in the FEIS prohibits snowmobiles in the parks and emphasizes mass transit snowcoach system.
Page 7-8. Re: NPS must protect natural quiet. NPS does not dispute that it must protect the natural quiet. Additional data has been developed for the sound analysis and will be incorporated into the final document.
Page 8. Re: Effects of noise on wildlife. Because quantifying the effects of non-natural sound on animals in the wild (as opposed to a controlled laboratory setting) is extremely difficult, NPS believes that analyzing the effects of machine noise on ambient sound levels is a legitimate substitute and can be used to infer effects on wildlife. NPS also believes that the effects of noise on wildlife are inherently included in the overall effects of snowmobiles on wildlife in terms of disturbance. Nonetheless, a review of the impacts of noise on wildlife will be included in the FEIS.
Page 8. Re: Effects of noise on natural quiet. Analysis of sound in the DEIS is sufficient in its determinations, by alternative, that winter use activities have adverse impacts on the natural soundscape. Additional data has been developed for the sound analysis and will be incorporated into the final document. The extent to which motorized sounds affect the experience of visitors will be addressed.
Page 8. Re: Mitigation measures in alternative B fail in terms of protecting natural quiet. NPS disagrees. Please see previous response.
Page 8. Re: Change sound level requirements and time line for compliance in alternative B. These features are within the range of alternatives that the

decision maker may choose among in the record of decision.
Page 9. Re: NPS must be violating its mandate to protect the natural quiet. NPS disagrees because the impacts in question are not on their face indisputable, and it is the function of an EIS to focus the issues by addressing those impacts as well as possible. At question is the difficulty of determining the "threshold of impairment." For example, when do the impacts associated with sound impair park values, such as natural quiet)? It will be up to the decision maker to weigh the available data, evaluate the possible impacts of each alternative, and decide if park resources are impaired.
Page 9. Re: Only citizens' solution will effectively deal with the noise issue. Expressions of support or objection to specific alternatives or alternative features will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision.
Page 9. Re: 1) Establish daylight only hours to protect safety of humans and wildlife in all alternatives; 2) Close CDST and close East Entrance in all alternatives; 3) Restrict backcountry travel in all alternatives; 4) Implement public education programs in all alternatives. The commenter's opinions will be considered in making the final decision, but that there is nothing in those opinions that substantively would alter the range of alternative features to be evaluated in the Final EIS. For example, if the features that are not supported were to be deleted from the range of alternatives then the analysis would be left only with features that the commenter likes or agrees with. If only the actions that are liked by the commenter remain, then there is effectively only one alternative, or a set of alternatives that are not significantly different. Proof of this logic lie in the commenter's opinion that there is only one alternative that warrants consideration, and that is the Citizens' Solution. From the NEPA standpoint, the analysis cannot be narrowed in this fashion. Therefore, expressions of support or objection will not be responded to, in general, by changes in alternative features – they will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision. People who commented in this fashion are asked to consider that there is a very clear separation between alternatives legitimately considered in an analysis and the expression of a preferred alternative or the decision to be made.
Page 10. Re: Economic effects of eliminating snowmobiling are minor compared to the revenue generated by the parks year-round. See pages 158-161 for a description of the assumptions and methodologies for evaluating socioeconomic impacts.
Page 10. Re: Citizen's Solution will have a minor economic impact. Please see previous response.
Page 10. Re: Cooperative, proactive planning is needed to address impacts to adjacent lands should snowmobiling be eliminated from the parks. We agree that decisions relating to winter use management may, to some degree, affect adjacent lands. Therefore, the DEIS evaluates effects on adjacent lands, including national forests, on pages 298-315, and it evaluates cumulative effects on pages 319-327. The information NPS had for these evaluations in the DEIS was dependent on information provided by the forest service, a cooperating agency. The biological assessment to be prepared and published along with the FEIS similarly includes areas of concern for wildlife beyond the park boundaries. NPS has invited the FS to provide information for this assessment. The national forests in the GYA all participated in an assessment of winter use under the purview of GYCC, and the DEIS incorporated the multi-agency winter visitor use assessment by reference and cited it specifically under cumulative effects on forest lands (page 326). NPS encouraged the forest service to use that document as a starting point for effects analysis considering the possible displacement of use from the parks. Potential displacement is noted as an impact on national forests in Effects on National Forest Lands (DEIS pages 298-303), and the FS has been provided with our best estimate of displaced use, based in part on the winter survey results. The FEIS will incorporate mitigation in terms of interim recreation use limits for some alternatives.
Page 11. Re: A list of supported alternative features, most of which are contained in the new preferred alternative. Please see response, "Page 9. Re: 1) Establish daylight…"

YELLOWSTONE
NATIONAL PARK LODGES
Operated By Amfac Parks & Resorts

Received DSC-AR
Architecture

NOV 22 1999

November 18, 1999

Mr. Clifford Hawkes
National Park Service
12795 West Alameda Parkway
Lakewood, CO 80228

Dear Mr. Hawkes:

As the primary concessioner in Yellowstone, Amfac Parks & Resorts, we are responsible for the operation of all in-park lodging, along with related dining facilities, gift shops, transportation and activities. In the winter season, these operations include the Mammoth Hot Springs Hotel, Old Faithful Snow Lodge, and oversnow transportation from Mammoth, West Yellowstone, and the South Entrance into the interior of the park.

We agree that there is a need to address present-day snowmobile use in Yellowstone so as to provide for a quality experience for the winter visitor. We appreciate the opportunity to comment, and would like to address some concerns we have with the Preferred Alternative B.

1) If the Alternative B is adopted, several logistical problems will be created for our operations. Travel between Old Faithful and Mammoth (the location of one of our two winter hotel operations, and our company headquarters) would be more difficult due to the fact that there would no longer be an uninterrupted path for oversnow vehicles between Madison Junction and Old Faithful. All of the company's guests, employees and freight departing from Mammoth would have to be transferred to wheeled vehicles at Madison Junction, or travel a significantly longer 86 miles via Canyon, Lake and West Thumb Junction to reach Old Faithful, rather than the current 51 miles.

   A second logistical problem is the transition of plowed roads to oversnow travel in the Old Faithful area. If our company were responsible for operating all or part of the public shuttle system, it would be important for both wheeled vehicles and oversnow vehicles to have access to our bus maintenance facility at Old Faithful. From a freight and luggage delivery standpoint, it would be much easier if wheeled vehicle access would be allowed to Old Faithful Snow Lodge; however, we wonder if this would seriously detract from our guests' winter experience.

P.O. Box 165, Yellowstone National Park, Wyoming 82190-165
Phone (307) 344-7901 ● www.travelyellowstone.com

Canyon Lodge ● Grant Village ● Lake Lodge ● Lake Yellowstone Hotel & Cabins ● Mammoth Hot Springs Hotel & Cabins ● Old Faithful Inn
Old Faithful Lodge ● Old Faithful Snow Lodge ● Roosevelt Lodge ● Fishing Bridge Recreational Vehicle Park ● Bridge Bay Campground
Canyon Campground ● Grant Campground ● Madison Campground

Mr. Clifford Hawkes
November 18, 1999
Page Two

We are also wondering about the specifics of the proposed bus shuttle system: would our company be required to provide this service, or would the National Park Service solicit bids from other operators for this service?

2) Currently, a portion of our Mammoth Hotel business is derived from persons staying with us at least one night on either the beginning or end of their Old Faithful Snow Lodge experience. This currently makes sense because of the uninterrupted direct over-snow route between Mammoth and Old Faithful. If the road is plowed from West Yellowstone, park transportation time will be substantially shortened from West to Old Faithful, and transportation expense would also be significantly less. We foresee that this factor would result in a fundamental shift of visitation to the West Entrance, and Mammoth would become unnecessary as a "feeder" to Old Faithful. This, of course, would further inhibit the economic viability of the currently financially marginal Mammoth operation as a winter destination. We would have no choice but to seriously consider closing it entirely for the winter season.

3) At both ends of the current winter season, visitation is already minimal. If the winter season were lengthened, with the requirement for our operations to remain open, we anticipate that revenues would not be sufficient to cover operating expenses.

4) We believe that if the West Yellowstone-Old Faithful road is going to be plowed, consideration should be given to plowing the entire west side of the park from Mammoth to Old Faithful. This would allow for wheeled vehicle travel between Mammoth, Old Faithful, and West Yellowstone, and would dramatically reduce the logistical problems for our company to support our Old Faithful Snow Lodge operation from our Mammoth headquarters offices.

5) Whichever alternative is eventually selected, if plowing of roads is involved, success of the implementation will rest solely with the National Park Service's ability to plow and maintain the roads during the winter season.

If you have any questions or need further information regarding these comments, please do not hesitate to contact me. We appreciate the opportunity to provide input in this decision-making process.

Sincerely,

James W. McCaleb
General Manager

Pages 1-2, Point 1. Re: Logistical problems if alternative B adopted. NPS agrees this would be a logistical consequence to the lodge operation for about 2 months of the year, for alternative B. At the present time, the Old Faithful operation is snowbound. It seems this is a logistical problem that has been overcome through time, since everything must be accomplished by oversnow vehicle during the winter. NPS does not feel that this logistical problem is insurmountable. The objective of the EIS analysis is to consider alternative winter programs. Certainly for those who wish to access Old Faithful from West Yellowstone as an oversnow experience, wheeled access would be a change. NPS feels that there are a number of people who would take advantage of this change in opportunities and visit Old Faithful using wheeled mass transit access. In alternative B, oversnow access would still be possible via the south entrance and Flagg Ranch. The implementation of any alternative that might make substantial changes affecting a concession operator will require negotiation between NPS and the concessionaire or be deferred until a new concessions contract is pending. This EIS and plan will decide broad program direction. The details of implementation are left until after the broad program is decided. Since the preferred alternative will change in the FEIS, the questions raised no longer apply to the direction NPS is leaning toward.
Page 2, Points 2 and 3. Re: Shifts in visitation due to plowing or season length. These points will be included in the effects analysis for alternative B.
Page 2, Point 4. Re: Plow entire north and west side of park, for logistic ease and economic viability of Yellowstone NP Lodge concessions. Plowing the road from Mammoth to Norris and then south to Madison was not considered to be a feasible alternative for several reasons. These sections of road receive a good deal more snow and wind during the winter season than other road sections proposed for plowing. Park maintenance staff are concerned that during the deep winter, the narrow curvy road template coupled with high cross winds would prohibit any degree of certainty in keeping the road open. Plowing these road sections during the late winter season as suggested in alternative C was considered to be the only feasible option for plowing from Mammoth to Madison. In agreement with the commenter, the analysis presented for both alternatives C and B (see pages 219-222 and 240 –242) suggest that adverse effects would occur under these alternatives because of the complex travel logistics required by both park visitors and employees.

Don Bachman
PO Box 7363
Bozeman, Montana 59771

Received DSC-AR
Architecture

NOV 1 8 1999

November 11, 1999

Clifford Hawkes
12795 W. Alameda Parkway
Lakewood, Colorado 80228

Dear Mr. Hawkes and DEIS comment reviewers:

Please carefully consider these comments when developing the final Winter Use Plan Environmental Impact Statement.

Let me begin by supporting the Citizen's Proposal. The Citizen's Proposal is a clear alternative which contains the crucial elements of a winter use plan that most effectively address the problems created by unplanned development of the motorized use of YNP and GTNP over the past 30 years. I have some other ideas which will be presented under General Comments.

Alternative B, the preferred alternative is not an acceptable solution to these problems, but as the preferred alternative, it demands comment in some detail.

Visitor use and access, YELLOWSTONE

- I support increased interpretive opportunities.
- I object to establishment of new oversnow motorized trails. This brings up the matter of Management Prescription Zones. Zones 4, 5, 6 and 7 (Table 2.) should be eliminated. Zone 3, Groomed Motorized Route (clean quite travel) should be the plan goal. There is no need for motorized "trails" groomed or otherwise. These "zones" are common on GYA public lands surrounding YNP and GTNP, and the Park Service is under no mandate to provide these prescriptions. While Zone 4, Groomed Motorized Route will continue as operative for several more seasons, strict air quality and sound emission requirements should bring replace this zone with Zone 3 management. This management goal will fulfil the "Desired Condition" of the parks for winter use, as expressed in the Purpose and Need for Action.
- While it is technically possible to open and maintain virtually any road in deep snow country for wheeled travel, virtaully all interested parties agree that this element of Alternative B is not an acceptable plan for Yellowstone National Park. My objections are based on wildlife impacts of a hard surface corridor bisecting winter habitat. Wildlife will congregate on the hard surface roadway to save energy. They will become trapped between plow berms. Exit holes will be difficult to establish effectively and will lead to other impacts. Animals will be subject to collisions with moving vehicles and will become further habituated and park values of natural process will be compromised. Maintenance requirements of the roadway is not addressed except sand application. There will be the need for continuous operation of heavy equipment on the roadway, and the need for snow storage on pullouts and at the Old Faithful terminus. Old Faithful will become a new snowmobile trailhead and day parking lot for idling diesel buses and vans

which will continue to create air quality degradation. Once plowing in Yellowstone is initiated, there will be eventual proposals to link Gardiner with West Yellowstone for vehicular travel. I have no problem with severing the *Loop Drive*, or closing some groomed routes, but this is not the mechanism to accomplish that objective, nor are these necessarily the segments that should be removed from oversnow travel use.

- I object to a lengthened motorized season from West Yellowstone. (I assume this is because the road opening has already been accomplished under alt. B)
- I feel that warming huts should be upgraded, but not necessarily increased in size. I hope that the proposed Norris warming hut will be further analyzed before construction.
- I support continued scientific studies and would like to see a systematic research plan included in this EIS process.

Visitor Use and Access, GT/RMP

- Same comments as above when applicable.
- I support the phase-out of snowmobiles and snowplanes from Jackson Lake.

Human health and safety, All Units

- I support late night oversnow travel restrictions.
- I support the implementation of information and enforcement programs.

Human health and Safety, GT/JDRMP

- I oppose the continuation of the CDST trail and program. If the CDST has to be an unbroken trail for bragging rights or other purposes, then a shuttle concession from Moran to Flagg would be appropriate. Otherwise, it is not the duty of the NPS to the State of Wyoming to facilitate this program by providing a right of way or utility corridor trail system.
- There should not be any motorized oversnow use of interior park roads other than for essential administrative or emergency necessity. GTNP is well viewed from the highway and there is amply snowmobiling opportunity on national forest lands.

Local communities and adjacent lands, All Units

- I support the principles of an information program and advisory committee, I think.

Natural Resources, All Units

- I support the principles under this heading except that sound emissions should be set at 60 dB(A).
- Current levels of administration should be changed so as to read, not to exceed use average of the past 5 years. More on that later.

Yellowstone

- I support continued scientific studies, and hope these will be systematically determined for topic, scope and timing and enabled by an RFP, or similar process.
- (Typo?) I think that you mean restrict nonmotorized use to designated trails in important winter range, which I would support.

3

General Comments

LIMITS:

The history of winter use in Yellowstone, and to some extent, GT/JDRP is one of reaction to visitor demands, with little attention to resource impacts or administrative planning. The result has been a ten year period of contentious prodding by various interests to develop this plan. The fact that it took the courts rather than agency initiative to develop this plan is a really sad commentary on the resolve of the National Park Service to fulfill it mandate to the American public. The result of these years of neglect is a feeling of distrust and skepticism, and most importantly, a degraded Yellowstone National Park.

The need for a winter use plan is clearly driven by increased winter use and the impacts winter activities are having on administrative operations and, most importantly on natural resources. Yet, in appendix A, about page 11 there is a statement which seems designed to quash discussion of limits. This EIS is defined as programmatic so as to set long term goals; how these goals will be achieved and implemented, has been deferred. The discussion of limits has been placed off limits. This is a plan without limits. The Cumulative Impact Analysis (pg 318) is virtually meaningless in this context.

Both the Citizen's Proposal and the Cooperating Counties comments reflect the need to set limits based upon average use figures to this point. Addressing use numbers seems reasonable element of any planning effort, and it is time for the NPS to be responsive to at least, this modest demand from the public.

The issue of limits is also central to the highly controversial matter of snowmobile use in Yellowstone. Snowmobiles are polluting, noisy and are often operated in an arrogant or unsafe manner. Despite these negative characteristics, I believe that individual snowmobile use is a utilitarian and appropriate method of viewing the wonders of this place.

I feel access should come through a mix of rental and private machines along with snowcoach opportunities. This mix would be determined by corridor patterns and administered in a fashion similar to the Grand Canyon Plan. For snowmobiles, the mix at the West Entrance would be in current pattern of 70% rental and 30% private. Within that mix, guided snowmobile tours could be granted some priority over individual rentals, as would "green machines" in the next few years. Snowcoach use would be encouraged through establishment of a substantial fraction of the total use allocation, perhaps 30-40%. Somewhat different patterns would be operative for the South and North entrances reflecting current use differentials.

The continued use of snowmobiles under this winter use plan would be dependent upon development of the most stringent standards applicable. Nothing less should be accepted in our national parks. These technologies should be phased in through annual increments and should be in place by the 2004-5 winter use season. Snowmobiles not meeting these standards would be banned. This requirement would also apply to the NSP and concessionaire fleet of snowmobiles. Grooming equipment should also be brought under pollution abatement requirements, but that is probably beyond the scope of this process.

CLOSURES:

The following groomed routes should be closed to motorized oversnow travel: Segment 7: Canyon Village to Fishing Bridge (15.7 mi); Segment 8, Fishing Bridge to East Entrance (25.4 mi.) and Segment 9: Fishing Bridge to West Thumb (20 mi). Clearly, the East Entrance access over Sylvan Pass should be closed to motorized travel. In my scoping comments, 7/28/98 and other correspondence with Yellowstone administrators, I have detailed the concerns and conclusions regarding the maintenance and importance of Segment 8.. The Sylvan Pass avalanche control program utilizes a fixed mount 105MM howitzer to bombard avalanche starting zones and may not produce avalanches while the corridor is closed to public travel. There is no assurance from a control program of this nature that spontaneous avalanches will not occur at other times.[1] The avalanche control program on Sylvan Pass is a dangerous and inappropriate activity and should be terminated. The control program at Lewis Canyon utilizes carefully placed explosives and is much more limited and appropriate than Sylvan Pass. Yellowstone is the only national park unit conducting avalanche control activities to facilitate snowmobile access. Other parks, notably Yosemite, Mt Rainier and Glacier utilize avalanche control techniques for spring road opening. The Glacier National Park of Canada utilizes a Canadian Army detachment to protect Trans-Canada Highway #1 (c. 2,500 vehicles/day) with similar artillery weapons. Various departments of transportation in the US use these techniques to protect hard surface highways for travel and commerce. There is no comparison between these necessary control programs to maintain safe public movement between states and communities and the current Sylvan Pass program which satisfies a non-essential economic agenda of Cody, Wyoming.

Closing the East Entrance corridor would eliminate 3.2% of winter use visitation from this entrance (average 3864 per winter) most of whom would chose to visit YNP from other available entrances. Grooming cost figures generated from Ap. F indicate a $1,372 cost each time Segment 8 is groomed from Fishing Bridge. If this grooming is every other day then seasonal costs amount to $71,323. The cost of the avalanche program and the clearing of avalanche debris from the groomed surface adds on to this figure. This is a huge subsidy for a miniscule number of visitors, but safety considerations for NPS control personnel alone, should dictate this corridor be closed. While the DEIS wisely addresses this problem through closure of Segment 8 in Alternative D, it is ignored in the remaining alternatives.

Closure of Segments 7 and 9 (Canyon Village to West Thumb) would impact about 20% of total visitors (Temporary road Closure EA, 11/97) Grooming savings would amount to $100,246 per season, if groomed every other day Closure of these segments would also eliminate the need for grooming machine replacement at $142,000 or purchase of new machines at c.$200,000.

The real value of closing this segment of the park to oversnow motorized use (including snow coaches) would be the return of a large portion of Yellowstone to a near pristine winter process where there would be only an occasional administrative vehicle, and permitted ski and snowshoe expeditions. Closure to motorized visitation would address concerns regarding noise, air and water pollution, illegal snowmobile incursion in Hayden Valley, wildlife corridor fragmentation, and the need to maintain the gas station and rest rooms at Fishing Bridge.

These closures would have undetectable adverse effect on gateway economics, with the exception of Pahaska Lodge and a few other North Fork businesses that would be impacted to a greater degree. Yellowstone National Park has no duty to maintain this access on behalf of these businesses of the so-called winter gateway community of Cody.

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[1] The avalanche problem description in Chapter III, pg. 102 inaccurately describes avalanche terrain as being slopes greater than 15%. Spring slushflows at high latitudes have been noted on slopes of 15°, but would be extremely rare in the GYA. Stating that "...most areas available for and used by back country skiers are subject to avalanches..." could be applicable for the Teton Range in GTNP, but an exaggeration for the majority of YNP.

NON-MOTORIZED USE

Some management directive should be developed to acknowledge winter rules for off corridor travel by non-motorized means. There are areas of the park which may be accessed by hiking nearly year around which should be included in the Winter Use Plan. These areas may include sensitive wildlife and resource areas.

Management Zones 9 and 10 should receive management emphasis in the selected alternative. Zone 9 should incorporate those areas where wildlife conflicts might occur and would be subject to temporary closure as warranted. Zone 10 pertains to areas for which backcountry use permits would be required. Zone 11 (total visitor exclusion) should be clearly defined and delineated, to include all geothermal feature areas currently closed. Zone 11 should not be designated for a non-motorized Sylvan Pass corridor, as stated in Alt. D. Permitted backcountry users should be made aware of avalanche potential on Sylvan Pass, but should not be restricted from passing through this area. Nor should Zone 11 be applied to the entire Yellowstone as stated in Alt. F. Opportunities for total solitude and self reliant experience should remain available in Yellowstone National Park in the winter.

A full range of Alternatives

This EIS process grew out of an agreement with plaintiffs to address a full range of alternatives for winter use in the parks. There has clearly been an effort to do so, but this has not been achieved. There should be an alternative which displays closure of east side corridors in YNP as I have suggested. Alternative F. defines closure of west side corridors. An additional alternative emphasizing the closure of east side corridors is necessary to round out the "full range" agreement.

Each alternative has as a common element, groomed oversnow motorized access from the South Entrance. I believe this strategy is appropriate and would stand the test of adaptive management scrutiny. On the other hand, it may well turn out, from further scientific investigation and analysis including the pending Bison Management EIS, that Park Service mandate may only be met through restriction of motorized access.

Selecting an alternative at this time which includes substantial closure, such as the east side groomed system would address many resource concerns while satisfying the mandate of providing for public access and enjoyment of Yellowstone National Park. I have attached the winter use alternative I presented at the West Yellowstone Public Hearing on 10/21/99 for your consideration.

In closing, I commend the authors for compiling a clear, easily navigated document, which, while flawed by no use limits and insufficient range of alternatives, is mostly usable for guidance for developing the Winter Use Plan

Sincerely,

Don Bachman

Don Bachman

Proposed Winter Use Alternative - West Yellowstone Public Meeting 10/21/99

VISITOR USE AND ACCESS

All units:

- Increase interpretive opportunities

Yellowstone:

- Close East Entrance Road to Fishing Bridge.
- Close Grand Loop Road from Canyon to West Thumb.
- Limit total visitor days and provide for a mix of snowcoach and snowmobile (rental and private) access from each remaining entrance (South, West and North). Base limits on clean-air quality standards and visitor experience requirements, similar to Grand Canyon corridor management principles. Implement by 2004/5 season..
- Improve, but don't expand, day-use facilities including interpretive and enforcement presence.
- Develop modest winter visitor center at Lamar Station.

Grand Teton/JDR Parkway.

- Eliminate CDST; replace with shuttle concession.
- Eliminate oversnow motorized uses, phase out snow planes w/no new permits

HUMAN HEALTH AND SAFETY

All Units:

- Improve visitor information program as to weather conditions and wildlife related restrictions.
- Close East Entrance over Sylvan Pass to motorized access.
- Limit total oversnow access visitor days
- Improve visitor day use facilities.

LOCAL COMMUNITIES/ADJACENT LANDS

- Implement information program cooperation w/local communities.
- Continue working with GYCC on winter-use monitoring and other issues.

NATURAL QUIET

- Require new technologies/sound emissions at or less than 60dB(A).

WILDLIFE

- Continue scientific studies of winter use and wildlife.
- Restrict nonmotorized use as warranted.
- Close East Entrance and Canyon to West Thumb to motorized use.
- Delay road opening initiation on plateau until 4/30.
- Restrict night operations of oversnow vehicles.

AIR QUALITY

- Require new technologies, phase in most stringent standards in annual increments to 2004-5 season. Ban all snowmobile access if AQ Standards are not reached at that time.

Submitted by:
Don Bachman
PO Box 7363
Bozeman, Montana 59771

[illegible]
Page 1. Re: Support for The Citizen's Solution. Features of this alternative were for the most part analyzed throughout the range of alternatives in the DEIS. Please refer to the matrix which illustrates where the features of The Citizen's Solution are evaluated in the DEIS. This alternative is not substantively different from alternative G in the DEIS, supplemented by features available in other alternatives. A remixing of features would yield an alternative whose impacts would be within the range expressed in the DEIS alternatives. Therefore, it does not warrant consideration as a separate alternative in the Final EIS.
Page 1. Alternative B will not be the preferred alternative in the FEIS. Conclusions drawn by commenters on "good" features versus "bad" features may be helpful to the decision maker. However, absent any rationale that would indicate a feature is not possible, all features will remain in the range of alternatives available for the decision. Most actions that are entertained within the range of alternatives have consequences one way or another, and these are disclosed to the necessary degree in the EIS.
Pages 1-2. These comments are interpreted as the commenter's rationale for the decision to be made based on his opinion about impacts. There is nothing persuasive in the comment that affects the range of the alternatives considered. Alternative formulation in this DEIS effort is highly complex. Many suggestions for alternatives or alternative features were made in the thousands of comments received. A great deal of criticism was leveled at the current range of alternatives because people did not like the way features were "mixed." At the same time, many people focused on features of alternatives that they liked, and features to which they were opposed. It is clear that for such complex issues there could be an infinite number of possible alternatives. CEQ states that in such instances, the agency need only consider a reasonable number of examples that cover the full spectrum of possible alternatives that meet the purpose and need (Question 1b, CEQ 40 Most-Asked Questions). What constitutes a reasonable range depends on the nature of the proposal and the facts in each case, where the proposal is at the discretion of the agency. The final selected alternative that is to be documented in a Record of Decision may mix features from the range of alternatives evaluated in the final EIS. Such mixing can occur as long as the mixed features are consistent with one another, and as long as the features and their effects would not fall outside the range of alternatives disclosed in the EIS (§1505.1(e)). A finding as to that circumstance would be entirely appropriate in the Record of Decision, along with the rationale, should the selected alternative not precisely correspond with one of the "mixes" evaluated in detail.
Page 3. Re: Use limits; the plan is meaningless without limits. As an action associated with all alternatives, visitor use capacities are to be determined (DEIS page 25). In practice, setting a carrying capacity is a highly complex and potentially divisive exercise. NPS managers decided there was not sufficient time available in the settlement time frame to devote to this type of analysis. NPS is developing visitor use scenarios for each alternative that will be the basis for a more quantified effects analysis and for mitigation. Some mitigation will be in the form of interim use limits pending carrying capacity analysis. The 7-year average will be one level of mitigation looked at in the FEIS, capping at current use will be another. These changes respond to cooperating agencies, EPA and others.
Page 3. NPS' programmatic plan will direct the types of use that are appropriate relative to constraints or standards that are part of the FEIS alternative (or alternative feature) that is selected in the decision. This includes limits on sound or emissions, and locations that are closed or open, and phase-in periods. Within that context, later implementation will consider how to allocate use to outfitters, guides or concessions, how park administration must change, and other "how to" kinds of details. Some details may be spelled out in the decision to be made, others may require additional site-specific analysis.
Pages 3-4. Re: closures. These comments are interpreted as the commenter's rationale for the decision to be made based on his opinion about impacts. There is nothing persuasive in the comments that affects the range of the alternatives considered, or the analysis of impacts disclosed in the EIS.
Page 5. Backcountry nonmotorized use is addressed in one or more alternatives by designating closed areas or areas in which travel is on designated trails only. These choices are available for the decision maker.

Page 5. These comments are interpreted as the commenter's rationale for the decision to be made based on his opinion about impacts. Though these opinions may be of interest to the decision maker, there is no other response to be made to them by changing the analysis or the alternatives.
Page 5. The range of alternatives in the DEIS is adequate, considering the decision to be made and the issues being addressed. Other alternatives effectively close large portions of the park, but the closed segments – e.g. Fishing Bridge to East Entrance, Mammoth to Madison and West Yellowstone to Old Faithful – respond to identified and significant problems. In terms of issues and impacts, NPS saw no reason, to date, to have an alternative closing the east side of the park including the Canyon to West Thumb segments. It would be a function of adaptive management in alternatives B and E, or the determination of some significant impact at a later date, to find the need for closing the entire east side.
Page 5. A few of the alternative features presented by the commenter are actions that would be associated with any alternative that might be selected. A majority of suggested features are present in the range of alternatives in the DEIS. NPS determines that to evaluate this alternative would not yield significant benefits toward the desired condition to a greater degree than any DEIS alternative.

William J. Barmore, Jr.
P. O. Box 17
Wilson, WY 83014
[redacted]

November 27, 1999

Mr. Clifford Hawkes
National Park Service
12795 Alameda Parkway
Lakewood, CO 80228

Dear Mr. Hawkes:

Thanks for so promptly sending me a copy of the *Draft Environmental Impact Statement and winter use plan for Yellowstone and Grand Teton National Parks* (DEIS&P). I feel particularly qualified to comment on the document since I was employed by the National Park Service (NPS) as a wildlife biologist and research biologist in Yellowstone National Park (YNP) from 1962 to 1970 and as a research biologist in Grand Teton National Park (GTNP) from 1974 to 1986 when I retired from the NPS. I have reviewed the impressive documents and have the following comments. I detect a sincere effort to do a first class job in preparing the document.

SUMMARY OF MAJOR POINTS AND CONCLUSIONS

These major points and conclusions are based on the more detailed, page-specific and point-by-point comments which follow this summary.

1. The NPS has gotten into its present predicament regarding winter use by not addressing the issue many years ago by the process presented in the current DEIS&P. The NPS has permitted levels and kinds of winter use within the parks, especially in YNP, to evolve and increase over the years to unacceptable levels without adequate planning or consideration of park values, protection of natural resources, and the kinds of visitor uses and the quality of visitor experiences appropriate in the parks. Thus, the surrounding communities have developed an economic dependence on current kinds and amounts of use in the parks which is very difficult to alter. The features of the various alternatives in the DEIS&P are strongly influenced by the current entrenched economic interests within and outside the parks, by political pressure applied by these economic interests and by other special interest groups. I am reminded of the problems of overflights of Grand Canyon National Park and the traffic and visitor congestion in Yosemite Valley.
2. Winter access in the parks by motorized vehicles is appropriate, but should be by oversnow vehicles (both mass transit snow coaches and snowmobiles) except for the roads that are currently plowed in the 3 units as described in Alternative A. The amount of use by motorized oversnow vehicles should be limited to that which properly protects natural resources, adequately protects

visitor safety, and that provides the high quality visitor experiences to be expected in these 3 units of the NPS.

2a. The document avoids addressing acceptable kinds and levels of use (carrying capacity). This should have been done long ago and is a major shortcoming of the DEIS&P. I believe this issue is mentioned only once or twice in the DEIS&P.

3. None of the alternatives described in the DEIS&P develop the best winter use plan for the 3 units. I believe the best winter use plan would be attained by combining some features of several of the alternatives, plus some features and actions not covered in the DEIS&P, into a new alternative with the following features and provisions:

   A. The road between West Yellowstone and Old Faithful should not be plowed but should be retained as a groomed motorized route as provided for in Alternatives A, D, and E unless studies determine that groomed routes significantly facilitate the movement of bison outside of the park above the amount that would occur without grooming. If that is the case, the road between West Yellowstone and Old Faithful would be closed to all motorized use.

   B. Motorized access to YNP (except for the plowed road from Gardiner to Cooke City, MT) should be by oversnow vehicles on groomed or ungroomed routes that are on roads open to public use during the nonwinter seasons. Plowed roads would be as described in Alternative A.

   C. In GTNP roads would be plowed as described in Alternative A.

   D. The plan would be based on the kinds and levels of visitor use that reflect park values, protect natural resources, and provide the kinds and quality of visitor experiences appropriate for the parks. The economic interests of adjacent communities would be considered and incorporated into the plan only to the extent that they are compatible with and would help achieve NPS objectives.

   E. Mechanized equipment would not be used to groom trails that are not open to mechanized travel during the nonwinter seasons. If this means that nonmotorized trails cannot be groomed. So be it. Mechanized grooming of routes or trails for nonmotorized uses should be done only on roadways that are open to public use during the nonwinter seasons.

   F. The number of permanent warming huts would be minimal and limited to those that are needed for public safety. Motorized and nonmotorized users get along just fine without such facilities on the vast majority of public lands used during the winter. Construction and manning of warming stations and interpretive facilities to the extent proposed cannot be justified under the current restrictions on funding in the NPS and dire need to devote current and any increased funding in the foreseeable future to addressing the current backlog of maintenance and operational needs.

   G. Manned interpretation would only be provided at developed destination areas. Only unmanned interpretive exhibits would be provided at the few warming huts.

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H. As provided for in Alternatives E and F, snowmobile travel would be prohibited in GTNP between the east park entrance and the end of the plowed road at Flagg Ranch. Movement of snowmobiles through this section of the park by users of the Continental Divide Snowmobile Trail (CDST) would be by wheeled vehicle shuttle.

I. Since motorized travel on Jackson Lake is permitted during the ice-free season, snowmobile and snowplane travel would be permitted as in Alternative A to the extent that such travel is safe.

J. In GTNP travel by oversnow vehicles on ungroomed routes would be permitted on the following roads that are open to mechanized vehicles during the snowfree seasons, as provided for in Alternative A.
   a. The inner park road between the Taggart Lake Trailhead parking area to the top of Signal Mountain.
   b. The Jenny Lake one way scenic drive.
   c. The Moose-Wilson road between the J Y Ranch and the Granite Canyon Trailhead parking area.

K. Only oversnow vehicles employing clean and quiet technology (this needs to be more explicitly described in the DEIS&P) would be permitted in all 3 units after 2002. By 2005 only oversnow vehicles that meet the standards for emissions and noise described for Alternative B on page 27 of the DEIS&P would be permitted in all 3 units. If these standards could not be met by 2005, motorized oversnow travel would be restricted to mass transit oversnow vehicles that do meet the standards. Until the lower emission and noise levels are attained as described above, the number of snowmobiles permitted on various road segments would be restricted to levels that attain emission levels which are healthy and noise levels that are acceptable. This is especially true for the groomed route from West Yellowstone to Old Faithful.

L. Travel by motorized oversnow vehicles would be prohibited between 8 P.M. and first light in the morning. The closure between 11 P.M. and 5 A.M. proposed in the DEIS&P is unrealistic and unacceptab.

M. Nonmotorized oversnow travel would be restricted to ungroomed, designated routes only in ungulate winter ranges to the extent needed to adequately protect animals inhabiting these areas as provided for in Alternatives B, D, and E in YNP and in all the alternatives for GTNP. Nonmotorized oversnow travel would not be restricted elsewhere unless studies indicate the need for restriction to designated routes in specific areas to protect natural resources

N. Levels of use at entrance points, destination areas, and along road segments that are open to motorized oversnow vehicles would be studied to determine appropriate levels of use (carrying capacity). Levels of use would be limited to the extent needed to protect natural resources, to insure public health and safety, and to provide the quality of visitor experience that is appropriate to a national park experience.

O. The road between the East Entrance and Lake Butte and between Canyon and Tower Junction in YNP would be closed to motorized oversnow vehicles but nonmotorized use would be permitted. Or these roads would be ungroomed and without avalanche control but open to both motorized oversnow vehicles and nonmotorized users. If users wish to travel these routes, they should do so at their own risk, as they do on millions of acres of USFS lands. After all, avalanche control for skiers and climbers in the Teton Range in GTNP is not practiced.

P. The effect of groomed motorized routes and trails on the movement of bison out of YNP in the vicinity of West Yellowstone would be determined. If the studies find that groomed routes significantly facilitate such movements out of the park greater than would occur without grooming, motorized travel between West Yellowstone and Old Faithful would be prohibited. An alternative might be to continue grooming even if grooming does facilitate bison movements out of the west side of the park--with a guarantee that bison could free range on public lands outside the park and not be slaughtered or trapped and shipped, as is currently the case, to address the State of Montana's perceived threat of transmission of brucellosis from bison to domestic cattle.

Q. Bighorn sheep winter range in GTNP would be closed to nonmotorized travel if it can be reasonably demonstrated that such use is affecting the distribution and abundance of bighorn sheep in the Teton Range. Illegal snowmobile travel in the Teton Range within the Jedediah Smith Wilderness and GTNP, especially within existing or potential bighorn sheep winter range, would be more stringently controlled with higher fines imposed on violators.

R. Adaptive management as described for Alternative B would be applied.

3a. The clean and quiet technology referred to in the DEIS&P should be described in greater detail.

PAGE SPECIFIC COMMENTS

I developed the following comments as I worked my way through the DEIS&P, thus there is some repetition, for which I apologize, and which I have tried to minimize by cross referencing comments. I reviewed the environmental consequences for Alternatives D, E, F, and G less thoroughly than for Alternatives A, B, and C.

4. **page 2**---The purpose and need for actionshould be more clearly and specifically described; such as: "The need for a plan is indicated by the difference between desired conditions and existing conditions. The purpose of a plan (or alternatively, the purpose of the proposed plan) is to attain the desired conditions, which reflect the parks' mandates and missions."

5. **page 4, Visitor Issues**---The statement suggests that the present levels or kinds of winter use exceed the capacity to provide the quality of visitor experiences and adequate protection of park resources. But the DEIS&P does not further address the carrying capacity issue. It should.

6. **page 7, 1st paragraph**---Although, as stated here that "economic development interests in communities expect support from land management

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agencies," these agencies, and especially the NPS, are not obligated to support such development interests. The economic situation in communities adjacent to the parks has become a serious economic, and thus a political problem, because the NPS has permitted levels and kinds of winter use within the parks, especially in YNP, to increase over the years to unacceptable levels without adequate planning or consideration of park values, of the requirements for protecting resources, and of the kinds and quality of visitor experiences to be provided. Thus, the surrounding communities have developed an economic dependence on current kinds and amounts of use in the parks which is very difficult to decrease. I am reminded of overflights of Grand Canyon National Park and traffic and visitor congestion in Yosemite Valley.

7. **page 23, Table 2**—
   A. "Resource Condition or Character" for Zone 1 should state that facilities should be as small as possible to accommodate appropriate kinds of winter use and numbers of visitors.
   B. "Resource condition or Character" for Zone 2 should state that means for wildlife to escape through high snow banks would be provided.
   C. "Visitor Experience" for Zone 2 should state that the amount of traffic might be constrained to provide for safe travel and an appropriate quality of visitor experiences.
   D. "Appropriate Activities and Facilities" for Zones 3, 4, 5, 6, and 7 should indicate that these routes will be on established roads open to the public during the summer—at least that should be the case. Reference to "Area" should be deleted, since this implies that indiscriminate off road travel would be permitted in such designated areas, which cannot be permitted in any of the parks. If "Area" refers only to Jackson Lake, then this should be stated.
   E. "Appropriate Activities and Facilities" for Zones 5, 6, and 7. Utilities, overlooks, and restrooms should not be provided along these trails (roads open to the public during summer) to any greater extent than they are appropriate during summer.
8. **page 25, Actions and Assumptions Common to all Alternatives**—
   A. The DEIS&P should state here and under similar topics throughout the document that all groomed motorized routes and all groomed motorized or nonmotorized trails would be on established roads and trails open to public use during the rest of the year. If that is not the case, it should be.
   B. Shouldn't it also be stated that all areas of the parks and parkway are open to nonmotorized oversnow travel except for specific, designated winter closures?
9. **page 25, last paragraph**— "near Slide Lake" should be deleted since the east of the park is nowhere near Slide Lake. Reference could be made to the east park boundary in the Gros Ventre River drainage. Or is it intended that GTNP plow all the way to Slide Lake? Clarify.
10. **page 26, Actions for Grand Teton and the Parkway, first bullet**—Isn't the Moose-Wilson Road plowed to the entrance to the J Y Ranch rather than just to the turnoff to the Death Canyon Trailhead?

11. **page 28, 3rd bullet**—Is it intended that all oversnow travel be prohibited between about 11 P.M. to 5 A.M. or just motorized oversnow travel? I see no reason to prohibit nonmotorized oversnow travel, although not much would occur anyway—except during magical moonlit nights.
12. **Page 28, Actions for Yellowstone National Park**
    A. **2nd bullet**—refer to ". . .on designated trails in the following areas." Somewhere in the document the manner in which trails rather than roads are groomed should be described. I strongly object to the use of motorized equipment to groom trails where motorized use is prohibited during snow free times.
    B. **last diamond**—plowing the road to Old Faithful will also address the current serious air quality and noise problems in that area. This should be acknowledged here.
13. **page 29**
    A. **1st diamond**—Would the shuttle service stop anywhere along the way to drop off and pickup skiers and snowboarders or others who want to spend a little time in a specific area, or would the shuttle service stop only at designated spots? Clarify. Will the number of private vehicles and trailers be restricted by reservations for the entire road between West Yellowstone and Old Faithful and Madison or just for daily and overnight parking at those areas? Or will unlimited use of the road by private vehicles be permitted as long as they don't park at Madison or Old Faithful? What about parking along the road or at trailheads by skiers and snowshoers? If private vehicle access and parking is to be restricted only at Old Faithful and Madison, a statement should be made that the amount of traffic on the remainder of the road may be restricted to address public health and safety problems that may develop or to provide satisfying visitor experiences, or something like that. This action item needs to be clarified.
    B. **2nd diamond**—I do not understand the meaning of the reference to delaying proposed plowing of interior sections of park road. Does this refer to just the road between West Yellowstone and Old Faithful or all park roads? Clarify.
    C. **1st bullet**—What is the purpose for not keeping the plowed road from West Yellowstone to Old Faithful open from mid-March to mid-April?
    D. **3rd bullet**—If public comments are strongly against recommended closures, will a needed closure be abandoned? Is the NPS going to be restricted to implementing justifiable closures only if the public approves? It should not be.
    E. **5th bullet**—I object to the magnitude of permanent warming huts that is being proposed. Would these facilities be open during the snow free period? Motorized and nonmotorized users get along just fine without such facilities on the vast majority of public lands used during the winter.
    F. **Actions for Grand Teton and the Parkway**
        a. **1st bullet**—Is the Moose-Wilson Road not to be plowed as far as the J Y Ranch, or is this an error as in the description of the

existing situation in Alternative A?

b. **1st diamond**—A paved road away from the highway for snowmobiles or bicycles cannot be justified by (1) current or anticipated levels of public use by either motorized oversnow vehicles or bicycles, (2) impacts on natural resources, and (3) construction and maintenance costs. Clearly, the separate road is being proposed to benefit snowmobile traffic not bicyclists. Such a road would not be proposed or constructed to benefit bicyclists alone. While the proposed road would give continuous access through GTNP and YNP to oversnow vehicles traveling the CDST, what good is a bike path that ends at either Flag Ranch or Colter Bay? Or is the long term plan be to construct a similar bike path separated from the highways through YNP? Not likely, nor should it be permitted. Although it would be good to have power lines buried through the northern part of GTNP and the parkway (and throughout the park for that matter), this should be done on its own merit, not in an attempt to further justify construction of a road for snowmachines. The NPS previously rejected construction of such a road. Nothing has changed to justify it now except political pressure from snowmobilers and the snowmobile industry. Snowmachine travel from the east park boundary to the end of the plowed highway at either Colter Bay or Flag Ranch should be by shuttle.

14. **page 30**

A. **2nd bullet**—If motorized travel on Jackson Lake is to be prohibited, the prohibition should apply to both snowmobiles and snowplanes. Phasing out the use over 5 years cannot be justified. One year's warning of the closure by public notice is sufficient. Jackson Lake is used by a very small snowplane clientele.

B. **3rd bullet**—I think "Mark ungroomed nonmotorized trails" is more accurate than just to "provide nonmotorized trails." This applies where the same topic is addressed throughout the DEIS&P. As it is, the statement suggests that these are the only places that nonmotorized use will be permitted. A statement should be added that nonmotorized oversnow travel will be permitted except where specifically prohibited to protect natural resources or public health and safety.

15. **page 30, 1st bullet**—Does wheeled access include private and commercial or NPS subsidized vehicles? Clarify. And clarify the reasons for closing the road to wheeled access from mid-March to mid-April.

16. **page 31, 1st bullet**—Would unlimited traffic by private vehicles be allowed? What about limits on parking at destination areas? Something should be said about allowing only that amount of traffic which can be supported by facilities, that provides appropriate public safety, and that provides the quality of visitor experiences appropriate for these3 units.

17. **page 31, 4th diamond under the 2nd bullet**—Would skiers and

snowshoers be able to debark from the snow coaches wherever they wanted or only at designated spots? Scheduling would have to be frequent and some method would have to be devised to assure that any skiers or snowshoers that might not make the scheduled pickups could be accounted for and picked up if necessary.

page 31, 3rd bullet---Again, this level of increased facility development cannot be justified considering the backlog of park operation and maintenance needs.

page 31, Actions for Grand Teton and the Parkway

A. **1st bullet**---Plowing the Antelope Flats Road is not justified because of the cost and difficulty of keeping it open.

B. **1st diamond under 2nd bullet**---Snowmachines should be shuttled from the east boundary to the end of the plowed road at either Colter Bay or Flag Ranch. Constructing a new paved road separated from the highway corridor cannot not be justified, especially to just provide "scenic diversions" for snowmachine users. The road would cost too much to construct and maintain for the little use it would get by either snowmachine users or bikers, it would unnecessarily impact natural resources, and it would invade a roadless area.

page 32

A. **1st diamond**---Grooming a snowmobile trail from the south boundary in GTNP to Moran should not be done. Snowmobilers will have to trailer their machines to the south park boundary anyway, and they can just as well trailer them to Mail Box Corner where an ungroomed trail could be provided to the boundary of the Bridger-Teton National Forest where snowmachine users would have access to travel on USFS roads and, unfortunately, to unrestricted cross country travel. I assume that the staging area for this trail would be within the park near the south entrance. This should be so indicated here, or if not there indicate where.

B. **1st bullet**---Snowmachine travel on an ungroomed route restricted to the inner park road from the Taggart Lake Trailhead to the summit of Signal Mountain is appropriate, but the more strict emission and noise standards required elsewhere in the park must apply here also. It makes no sense to ease up on these restrictions in the heart of the park while requiring them on the proposed snowmachine trail from Jackson to Moran where machines without these restrictions would have full use of the closely adjacent USFS lands.

C. **2nd bullet**---Again, if snowmobiles are going to be permitted on Jackson lake, they should be required to use clean and quiet technology technologies. Snowplane use should be phased out.

D. **3rd bullet**---Clarify why groomed nonmotorized trails at the Gros Ventre Campground are proposed.

E. **5th bullet**---The expense of maintaining a campground at Colter Bay is unjustified. If some limited spaces for campers are to be provided, this should be at Flagg Ranch, since the highway will be kept open to there. I cannot see the concessionaires being interested in providing overnight accommodations or a grocery store at Colter Bay.

21. **page 32, Actions Common to All Three Park Units,2nd diamond**--The DEIS&P should provide justification for selecting 2008-2009 as the time when more strict emission and sound standards for oversnow motorized vehicles. But these stricter emission and noise control requirements should be implemented before 2008-2009. Plowing the road from West Yellowstone to Old Faithful apparently would reduce the most serious public health and safety and other concerns in that area of YNP. But waiting until 2008 or 2009 to implement these standards in other areas of the parks implies that public health and other concerns associated with motorized oversnow vehicles are not, and will not, present problems until then. Is this the case? The restriction to mass transit oversnow vehicles should be implemented if the new restrictions on snowmobiles cannot be met by an earlier date, such as 2002-2003.

22. **page 33,**

    A. **1st diamond**--Restrictions on night time use is a good idea. But restrictions should be earlier than 11 P.M. and later than 5 A.M. During the short days and long, cold nights during winter, I would guess that very little snowmachine use occurs this late at night or begins that early in the morning. Selection of these times must be backed up by data that indicate there is significant use at night. A more realistic time would be a restriction from 8 P.M. and 7 or 8 A.M. This night time restriction should apply to all the alternatives, and definitely to the alternative that is finally selected.

    B. **3rd bullet**--Manned interpretive programs cannot be justified at warming huts. These should only be provided at destination facilities. passive interpretive exhibits might be justified at warming huts.

23. **Actions for Yellowstone National Park, page 33**

    A. **1st bullet**--Until lower emission and noise levels are attained, the number of snowmobiles permitted on various segments should be restricted to achieve levels that attain emission levels protect public health and to noise levels that are acceptable. This is especially true for the groomed route from West Yellowstone to Old Faithful.

    B. **4th bullet**--All groomed or ungroomed motorized routes should be restricted to roads that are open to public use during other seasons. This should be made more explicitly apparent in all alternatives.

24. **page 34, 1st bullet**--Although I dislike this level of control, this restriction to designated trails in critical wildlife winter range should be applied under all alternatives--if the level of use can be demonstrated to adversely impact wildlife distribution or behavior.

25. **page 34, Actions for Grand Teton and the Parkway**

    A. **1st and 2nd bullets**--The only justification for not plowing the road to Flagg Ranch is to decrease the length of the CDST that would be along a plowed highway. Doing so would probably mean that facilities similar to those at Flagg Ranch would have to be constructed and maintained at Colter Bay and all or most of the services provided at Flagg Ranch probably would be abandoned (during winter) at Flagg Ranch. Again the CDST trail should be a shuttle through GTNP to the end of the plowed road at either Colter Bay or Flagg Ranch.

B. **3rd bullet**—Again, I believe oversnow vehicles in appropriate numbers can be permitted on some roads that are open to the public during the summer. This would include the road from Taggart Lake to Signal Mountain, but not the unpaved roads east of that road and the Snake River.

26. **page 36, Actions for Yellowstone National Park, 3rd bullet**—This should more clearly indicate that the backcountry is closed to all nonmotorized travel. But I do not believe this is justified, except possibly for restrictions to designated trails in important ungulate winter range.

27. **page 37, Actions for Grand Teton and the Parkway**—Something should be said about the CDST between the east park boundary and Colter Bay. No snowmobile travel between these points ? Provide a shuttle service? Figure 14 does not show a snowmobile trail between these 2 points but the DEIS&P should discuss how long distant travelers on the CDST are to cross this section of the park.

28. **page 80, Floodplains**—Is it true that all developed areas are above historic floodplains? What about parts of Flagg Ranch and all the facilities at Moose? Clarify. What do you mean by "historic floodplains"?

29. **page 81, Vegetation**—The damage to roadside forest vegetation by repeated plowing by snowblowers can significant impact the vegetation and esthetics. This should be pointed out for those alternatives that call for keeping roads open during the winter.

30. **page 95, 1st paragraph**—It is imperative that the NPS address acceptable levels of use at entrance points, destination areas, and along road segments that are open to motorized oversnow vehicles in terms of providing adequate public health and safety and the quality of visitor experiences appropriate in a national park.

31. **page 100, Time**—These data need to be expressed in terms of the relative snowmobile traffic during day and night. Naturally most traffic would be during the day. The data on incidents with bison at night supports the need to restrict motorized traffic during the night.

32. **page 101**—The stated concern by snowmachine users on the CDST in GTNP supports the need to shuttle snowmachines through GTNP to the end of the plowed road at Colter Bay or Flagg Ranch. It does not justify building a new road away from the highway to serve snowmobile users, with or without use by bicyclists during the rest of the year. The NPS should stick to its original conclusion that a new snowmobile route away from the highway corridor was not acceptable. This information and the reason for this decision should be discussed in the DEIS& P.

33. **page 102, Avalanche Hazards, Yellowstone National Park**—For the level of use that is or can be expected on the groomed route over Sylvan Pass or the ungroomed route over Washburn Pass, neither grooming nor avalanche control is justified. If users wish to travel these routes, they should do so at their

own risk, as they do on millions of acres of USFS lands. After all, avalanche control for skiers and climbers in the Teton Range in GTNP is not practiced. Why the difference?

34. **page 116, bison, 3rd paragraph**---The impact of groomed routes on the distribution of bison needs careful attention. It seems highly likely to me that this groomed routes have had a major effect on bison movements between Pelican Valley, Hayden Valley, Firehole Valley, and on out the west entrance of YNP. This is unacceptable, particularly as it may impact bison moving out of the west side of the park. Of course, the road between Gardiner and Cooke City, MT, whether plowed or not would not would have little effect on the number of bison migrating out of the north entrance—where most of the bison have been killed or trapped over the past few years. Even if the Gardiner-Cooke City road was not plowed, bison, like elk, could and would migrate down the Yellowstone River and out of the park when snow conditions or forage availability became limiting. Migration down this river corridor is easy due to the lesser snow depths than in the interior of the park and the environmental gradient of decreasing severity of winter conditions from the Lamar Valley to Gardiner and beyond.
35. **page 119, Mountain Goats *(Oreamnos americanus)***—Due to the artificial introductions of mountain goats into previously unoccupied range, they cannot be considered a product of natural colonization. Although it may be necessary from a practical standpoint to accept their occupation in YNP, this should be evaluated in terms of their impact on the native bighorn sheep populations and distribution. Due to the precarious status of bighorn sheep in GTNP, expansion of mountain goats from the Snake River Range into the Teton Range is unacceptable.
36. **pages 126-130**—The concern about natural quiet in natural area parks like the 3 units under discussion here is extremely important, and I am glad to see this discussion and concern expressed in the DEIS&P.
37. **page 135, Park Roadways and Motorized Trails**--The DEIS&P should provide more details as to how these routes and trails are groomed—the kind of machinery.
38. **page 135, Park Roadways and Motorized Trails, Yellowstone National Park, 1st paragraph**—Here it states that the segment between Washburn Overlook and Tower-Roosevelt is closed to all winter travel due to avalanche danger. But on page 102 it is stated that avalanche control is practiced at Dun Raven Pass. If the road is closed to all travel, why avalanche control? Or is avalanche control practiced only when the road is being plowed in the spring? Clarify.
39. **page 136**--The DEIS&P should describe how these nonmotorized trails are groomed. Motorized vehicles? Nonmotorized? Motorized vehicles should not be permitted on trails that are not open to motorized use during the summer---which means all trails.
40. **page 148, Table 29**--The low use of the CDST certainly doesn't justify the cost of construction and maintenance of a paved road separate from the highway as is proposed for Alternatives B.
41. **page 149, Visitor Experience, 2nd paragraph**—Since most of the

people surveyed were on a snowmobile, at a hotel, or with an interest group, and did not represent all users of the parks, interpretations and conclusions are no doubt biased in favor of the preferences of motorized oversnow vehicle users. More specific data from these surveys should be included in tables---numbers and percentages, of visitors in the various use categories, breakdown of preferences, values, satisfaction, etc. by user category.

42. **page 150, Numbers of Winter Visitors**---The increase in winter visitors should be given through 1998-99 (124,275, which should be 124,136, Table 21) instead of just for1997-98 (119, 274). In addition, since some of the data in Table 21 are wrong, some of the figures for visitor use here are also wrong.

43. **page 151, 1st full paragraph**---Did the visitors that stayed more than 1 day stay in the parks or did they stay in facilities in the parks plus facilities in communities outside the parks? Clarify.

44. **page 151, Visitor Surveys, 1st and 2nd paragraphs**---For the 2 surveys conducted in the parks, the number and percentages of the several kinds of visitors surveyed should be given. Was the 1998/99, like the 1997 survey, also only of snowmobilers and snowcoach riders? There seems to be a paucity of information on nonmotorized users in the parks.

45. **page 155, last paragraph**---The document would be more informative if the acreage of private land within GTNP was included. This information is easily available.

46. **page 175, Wildlife**---I question the strong statements here. I think it should be modified by stating ". . . backcountry use in GTNP could or may result. . . ." and ". . . effects on bighorn sheep could be or may be moderate to major. . . ." I don't think the DEIS&P contains enough information about the level of use of the backcountry by skiers or snowshoers or by the illegal use by snowmobilers to make such strong statements.

47. **page 177, Conclusion for Effects on Public Health**---There is every indication that visitation levels will increase. Since this is indicated in the discussion of the impacts of some of the other topics, it should be indicated here too.

48. **page 182 Presence and use of plowed roads**

    A. **1st paragraph**---The statement that plowed roads would have a positive impact is incorrect, whether considered in and of itself or not. Such use of plowed roads by ungulates disrupts their natural distribution, habitat use, and possibly population dynamics. Thus by definition, this is a negative impact regardless of whether individual animals benefit from greater energy efficiency. This is irrelevant. This comment applies elsewhere where this statement is made in the DEIS&P. The DEIS&P fails to address the impact of plowing the road between West Yellowstone and Old Faithful on movements of bison out of the park onto public and private land in the West Yellowstone area where they are slaughtered or trapped and shipped due to the remote possibility that they might transmit brucellosis to cattle. In addition, the DEIS&P must compare the relative impact on bison of plowing vs grooming the road between West Yellowstone and Old Faithful, i.e., would plowing this road segment have a greater, lesser, equal, or unknown impact compared to grooming the route. This issue is also dodged here by stating that "All other potential impacts would be the same as stated in alternative A which also doesn't address the issue. Thus, the issue is not addressed at all! Failure to more specifically address the impact of plowed or groomed roads in the West Yellowstone-Old Faithful region is a major shortcoming of the DEIS&P. This comment applies elsewhere where this statement is used in the DEIS&P, e.g. for Alternative B on page 209.

B. **2nd paragraph, last sentence**---The meaning of this sentence is unclear. If the impacts are applied to the entire population of an area, are the impacts more or less severe? Clarify. This comment applies elsewhere where the statement ". . . unless they are applied to the entire population of an area." occurs.

49. **page 184, 1st paragraph**---See Comment 48A.

50. **page 186, presence of plowed roads, 2nd paragraph**---Impacts on lynx in GTNP is mentioned here but wouldn't similar impacts occur in YNP?

51. **page 191, Mitigation, 1st 2 bullets**---These recommendations seem to be unrealistic. Will groomed or ungroomed roads within these restricted areas be closed during the critical time periods? Or does winter use occur during these critical periods? Clarify.

52. **page 209---1st paragraph and last sentence of the section on the impacts of plowed roads on this page**---See Comment 48A.

53. **page 210, last sentence in the 3rd paragraph**---See Comment 46.

54. **page 218, 1st paragraph**---See Comment 13A.

55. **page 221, 4th paragraph under Quiet and Solitude**---This greatly overemphasizes the benefits of the 11 P.M. to 5 A.M. closure. Not many visitors are going to be outside skiing, snowshoeing or otherwise during this period. It is too cold to be inviting then. Besides everyone who is staying at overnight accommodations will wisely be asleep!

56. **page 222, 2nd full paragraph**---At one point this paragraph states: ". . . indicate that sections of the park must be closed or certain uses restricted to protect these values." This is followed by: "all visitor experiences currently afforded in the areas of closure would be eliminated." These statements are not in agreement. Clarify.

57. **page 222, Opportunities to view wildlife and scenery, 2nd sentence**---This should also state that there would be fewer opportunities due to the closure of Jackson Lake to snowmobiles after 5 years.

58. **page 225, Effects on Public Health, 3rd paragraph**---I assume that the reference to wood smoke in the staging area refers to that created by fire places and wood burning stoves in Jackson. This should be more clearly stated.

59. **page 225, Effects on public safety**---Here again is the implication that unlimited access by private vehicles will be permitted. That is unrealistic and is the reason for the current problems created by snowmobile use between West Yellowstone and Old Faithful, including the entrenchment of substantial economic interests in West Yellowstone that are dependent upon snowmobile use and that makes it politically difficult to eliminate, put a cap on, or even

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reduce the current level of snowmobile use.

60. **page 231, Conclusion**---The statement about the sale of only clean fuels and oil should indicate that this applies only within the parks, not to refueling facilities outside the parks.
61. **page 231, Presence and use of plowed roads.** Plowed roads cannot be considered a benefit to wildlife. See Comment 48A.
62. **page 236, 1st paragraph**---This should indicate that the unregulated use and impacts would primarily be due to unrestricted use in winter range areas.
63. **page 241, last paragraph**---The specific activity group that would be adversely affected should be identified---snowmobilers.
64. **page 243, Conclusion, 1st sentence**---I don't believe this is a logical assumption. For example the document states on page 236 that unregulated backcountry nonmotorized use would have a moderate negative and short term impact. Clarify the basis for making this assumption.
65. **page 251, 4th paragraph, last sentence**--- I don't think the DEIS&P contains enough information about the level of use of the backcountry, specifically use of bighorn sheep winter range, by skiers or snowshoers or the illegal use by snowmobilers to conclude that such use has had and will continue to have a moderate or major adverse impact on bighorn sheep.
66. **page 256, 1st paragraph**---Would facilities at Flagg Ranch, other than being a staging area, remain open?
67. **page 272, GYA Regional Economy, 1st paragraph, last sentence**---Shouldn't this state that the west side of the park is closed to all motorized winter travel? At least that is what is implied by the description of this alternative on page 36. Or should the description on page 36 more specifically state that nonmotorized travel is restricted to designated routes in the front country and the backcountry (or remainder of the park) is closed to all nonmotorized travel? Clarify.
68. **page 273, last paragraph**---At what 2 locations will use levels be limited? Colter Bay and Flagg Ranch? Clarify.
69. **page 284, Opportunities to view wildlife, last sentence.** It is not true that wildlife viewing opportunities would be the same as for Alternative A, since all backcountry use is prohibited in Alternative F. This also applies to the same statement under Opportunities to view Scenery, 2nd sentence on page 285.
70. **page 302, Alternative F, General Impacts, 1st paragraph**---Closing the road between Norris and Mammoth would have no effect on the movement of bison out of the park to the north. The bison that make this migration do so from the northern range and would continue to do so regardless of whether or not the road between Mammoth and the Northeast Entrance is plowed. Bison could, and would, easily migrate out of the park to the north because snow conditions would not be an obstacle to them migrating down the environmental gradient from more severe snow conditions in the east to less severe conditions down the Yellowstone River drainage.
71. **page 322, 1st paragraph, 1st sentence**---This is not true, at least for the Bridger-Teton National Forest east of GTNP where all these uses occur.
72. **page 326, Additional Impacts of the Proposed Actions, 2nd**

sentence—In Alternatives B, D, and E, skiing is limited to designated routes only in ungulate winter range.

EDITORIAL COMMENTS

I recorded the following comments as I worked my way through the DEIS&P. Perhaps some of them will be useful in preparing the final EIS&P and Record of Decision.

73. **page 4, Visitor Access**—What is the difference between "winter visitation access" and "winter visitor access?" The statement that winter visitation access will be increased but winter visitor access will be decreased seems to be contradictory. Clarify.
74. **page 4**—The subtitle "Visitor Safety" should be changed to "Visitor Health and Safety," And "air quality" (as it affects the health of visitors and employees, due to emissions from oversnow vehicles, particularly snowmobiles) should be added to the list of concerns under this heading.
75. **page 26, Actions for Grand Teton and the Parkway, 2nd bullet**—This would be better worded as follows: "Ungroomed road segments open to oversnow motorized vehicle travel . . . ."
76. **page 27, Actions Common to All Three Park Units, 1st bullet**—The following is more clear for the average reader: ". . .consistent with criteria for controlling off-road vehicle use in 36 CFR 2.18."
77. **page 29, 1st bullet**—refer to "roads" rather than "areas".
78. **page 83**— "Impact Topics Address" should be "Impact Topics Addressed."
79. **page 90—Minority and Low-Income Populations, 1st paragraph**—Table 7 gives an overview of the 17 GYA counties compared to Wyoming, Idaho, and Montana—not as just Montana as stated here.
80. **page 94, last paragraph**— "Table 9" should be "Table 10."
81. **page 118, last paragraph**— "3000 feet" is incorrect. It should be "3000 meters," or if expressed in feet, it should be "above 9000 ft."
82. **page 135**—The Jackson, WY, is not 13 miles south of the south boundary of GTNP, more like 1 mile.
83. **page 137, Segment 7**—The sentence "West of Hayden Valley, the road rises and crosses the Central Plateau, which separates the Hayden Valley from the Firehole River Valley" is not true. This segment follows the Yellowstone River to Fishing Bridge and the west shore of Yellowstone Lake to West Thumb, then it crosses the Central Plateau to the Firehole River Valley.
84. **page 139**
    - A. **5th paragraph**—I believe that the Moose-Wilson Road is plowed to the entrance to the J Y Ranch, not just to the Death Canyon Trailhead turnoff.
    - B. **Last paragraph**—This needs to be clarified that these road segments are plowed and not open to oversnow machine use. This paragraph should be deleted and combined with the first paragraph on page 140. It is very confusing as it stands.
85. **page 142, Grand Teton National Park and the Parkway, 1st paragraph**—The document should indicate that the Moose Visitor Center is

open during the winter.

86. **page 143, Table 21**—Many of the totals, percentages, and all the averages do not add up based on the other data given in the table. Major errors are present. Something is really wrong here and probably in some of the other tables on winter visitor use. I did not check them all.

87. **page 144, Table 22**—The total of 616,402 in Table 22 is wrong, given the data in the table. I get a total of 1,22,428 for the Total column compared to the 616,402, which is the total for the Total row. Either the data in the table is wrong or someone cannot add. For example, the total for the North Entrance column should be 366,383 instead of 196,759. I did not check the other columns. Thus the percentages given in the following tables for the several entrances are wrong.

88. **page 144, North Entrance and Table 22**—Why are the percentages given here based on the period between 92/93 and 97/98 when the data in Table 22 covers the period from 89//90 to 98/99? And why are the data for 98/99 not included in computing totals and averages? Or should the period 97/98 used in the discussions for the several entrance stations be 98/99? If the 92/93 to 97/98 period is to be used to match with other data referred to later, only the data, totals, and percentages for that period should be shown in Table 22. Or if you want to show all the data in Table 22 as it stands and use the period 92/93 to 97/98 in the discussions, totals and percentages should be given separately for the 89/90 through 91/92 period, the 92/93 to 97/98 period, and for 98/99. Since the data in Table 22 is wrong, the number of visitors and the percentages given here in this paragraph are wrong. There is also an error in Table 24. The figure of 430,977 should be 430,877. I did not check the data in Tables 25 or 26. This comment also applies to Tables 23, 24, and 25 and the numbers and percentages given in the discussions for the other entrance stations.

89. **page 145, Table 23**—Shouldn't the percentages >1% given here be <1%, as shown in Table 24?

90. **page 146, East Entrance Station**—Table 25 given here should be Table 22 and Table 25 should be referred to following "Pahaska Tepee." The percentages given in this paragraph do not agree with those in Table 25. 85% should be 86% and 15% should be 14%. In addition shouldn't the 0% given in Table 25 be <1%?

91. **page 147, Table 27**—"Coulter Bay" should be "Colter Bay."
page 150, Group Origins, etc.— "from outside the state" should more explicitly be "from outside Wyoming."

92. **page 162, Table 37**—It seems to me that use of these Impact Categories should indicate whether the impacts are positive or negative. Or are the positive or negative nature of the impacts indicated when specific impacts are discussed? This comment applies to all other tables that use these Impact Categories.

93. **page 164, 1st paragraph**—
    A. The last sentence in this paragraph is the same as the first sentence. One of them should be eliminated.

B. The citation to "GYCC 1999" should be spelled out in all the citations for it, since that is the way it is cited in the bibliography. Or the citation in the bibliography should be GYCC.

94. **page 165, last paragraph**---Wouldn't the following be more accurate? ". . . disturbed less by vehicles on roads than by people on foot or skis who are not confined to a specific route or trail." Only 1 of the 5 citations in this paragraph are included in the Bibliography. Hardened snowmobile trails as well as hardened ski trails may influence other species.

95. **page 166**---The reference to "Horejsi 1976" is not in the Bibliography. References to NPS 1998 need to be more specifically identified as "a" or "b" here and in the Bibliography, since the Bibliography includes 2 citations for NPS 1998.

96. **page 167, 2nd paragraph**--- "Cassier" is spelled "Cassirer" in the Bibliography. And Tyers In Press is not in the Bibliography. Tyers In Press is not in the Bibliography and should be.

97. **page 168**
    A. **Eagles**— "Stangl 1999" is given as "Stangl 1998" in the Bibliography.
    B. **Lynx**--- "Aune, et. al." and Halfpenny et. al." are not in the Bibliography. And Schultz and Bailey 1978 deals only with elk. Why use that reference in a discussion of lynx?
    C. **Wolves**---Thurber 1994 should be Thurber et al., at least multiple authorship is given in the Bibliography.
    D. **Wolverine and Fisher**--- "Copeland 1996" and "Auther et al" are not in the Bibliography. And "Gunther et al. 1997" is given as 1998 in the Bibliography, and there is no reference to "Gunther et al. 1999" in the Bibliography.

98. **page 169, Trumpeter Swan**---Specify dates for the spring breeding season. "Ehrlich et al. 1989" is not in the Bibliography.

99. **page 170, Table 38**— ". . . consequence the population" should be "consequence to the population under both Moderate and Major Effect categories.

100. **page 171, 2nd sentence, last paragraph**---What 1996 report? Give a specific citation for it.

101. **page 172, 1st full sentence**--- "Presence of [--what?--] tends to reflect.

102. **page 174, Visitor Experience, 2nd paragraph**---give the specific citations for the surveys of winter visitors.

103. **page 179, Geothermal Habitats, 1st paragraph**---The Bibliography contains only a reference to Kurz 1998; not Kurz et al. 1998 and no 1997 reference.

104. **page 182, 1st paragraph**---Snook and Davis 1996 is Snook and Davis 1997 in the Bibliography.

105. **page 186, 2nd to last paragraph**---NPS 1993 is not included in the Bibliography. Either National Park Service or NPS should be used in citations in the text and in the Bibliography; not NPS in the text and National Park Service in the Bibliography.

106. **page 187**
    - A. **3rd paragraph**---The citation here should be Stangl 1998. The entire citation should not be given here.
    - B. **4th paragraph**---GTNP and the parkway should also be included in this discussion of impacts on lynx.
    - C. **last paragraph, 1st sentence**---This should read ". . .trails and their use is very small. . . ."

106a. **page 188, 2nd to last paragraph**---NPS 1995 is not in the Bibliography. See Comment 105.

107. **page 193, Snowplanes, 1st paragraph**---The statement "Interpret the table as described in the YNP alternative A impact paragraph" is confusing. Clarify and give a better description of where this statement can be found. This comment applies elsewhere that this statement is made.

108. **pages 194 and 195, Tables 44, 45, and 46**---Shouldn't these tables be in the Affected Environment chapter since Alternative A is the existing condition?

109. **page 196, Quiet and Solitude, last sentence**---Rather than refer to "many visitors responded" the number or percentage from the survey data should be given.

110. **page 214, Table 47**---The comparison between Alternatives A and B would be a lot easier if both sets of data were included in this table. Flipping back and forth between this table and Table 42 to make the comparison is inconvenient at best.

111. **page 219, Table 48**---The title of the table should be: ". . . available under Alternative B compared to Alternative A." The heading "Miles or areas" is confusing. The units of measurement (miles or acres) should be stated in the column for each opportunity. This comment also applies to Tables 50, 52, 54, 56, and 58.

112. **page 220, Quality of the Groomed Surface**--- "hardened" should be "harden."

113. **page 221, Conclusion, 1st paragraph, 2nd sentence**---Shouldn't this be " visitors that access the park by snowmobile using the West Entrance. . . ." ?

114. **page 222, Table 49**---See Comment 111. The "Ungroomed motorized trail or area" opportunity should indicate "0 acres" in the Miles or areas column with reference to a footnote: "Jackson Lake 5 years after implementation of the plan." The Increase/Decrease column should the decrease of the acreage of Jackson Lake at low pool (full pool is 25,540 acres). This comment also applies to Tables 51, 53, 55, 57, and 59.

115. **page 239, Conclusion, 1st sentence**---Shouldn't this refer to "closing visitor access by snowmobiles"?

116. **page 256, 2nd paragraph**--- Begin the paragraph with "In GTNP oversnow motorized opportunities. . . ."

117. **page 263, Conclusion, last sentence**---This should be identified as applying specifically to GTNP. This also applies to the last sentence on page 290.

118. **page 264, Wildlife, 1st paragraph, last sentence**---Specify that the

limitation of backcountry nonmotorized use to designated routes applies to winter range.

119. **page 269, The availability of access to winter activities or experiences**—This should read: "Backcountry users are restricted to designated routes only in important winter range."

120. **page 296, Quiet and Solitude, 1st sentence**—"visitor" should be "visitors."

121. **page 298, Effects on Adjacent Lands**—Apparently the states provided much or all of the information on the effects on the states. This should be clarified here.

122. **page 305**
    A. **3rd bullet from the top**—Helfrich 1999 is not in the Bibliography.
    B. **7th bullet from the top**—Taylor 1985 is not in the Bibliography. The reference there is to Taylor and Skidgel. Here and at the 8th bullet, why couldn't NPS surveys of expenditures be used to separate expenditures within the parks from expenditures outside the parks? Clarify.

123. **page 306, Economics**—There seems to be a vast difference in estimates of economic impacts by the NPS (pages 198 and 199) than the estimates given here. Discuss and clarify. This comment probably applies to the other estimates of economic impacts in this section on Effects on Adjacent Lands.

124. **page 312, Direct and Indirect Effects on the state of Idaho by Alternatives B through C, 3rd paragraph**—It is not true that plowing the road from West Yellowstone to Old Faithful would eliminate the quality of enjoyment of all users.

125. **page 319, Cumulative Impacts Common to All Alternatives**—None of the citations in this paragraph are in the Bibliography.

126. **page 321, last paragraph**—Which park is referred to here? Or should "park" be "parks" or should YNP and/or GTNP be specifically mentioned? Clarify.

127. **page 340**—The reference to Meagher, M. M. 1970 should more properly be Meagher, M. M. 1973 The bison of Yellowstone National Park. National Park Service Scientific Monograph Series No. 1. 161 pp., or both of these documents should be cited.

128. **page 344**—Do the references Tyers, D. B. 1999 and Tyers, Dan 1998 refer to the same document?

I appreciate the opportunity to review and comment on this important document. I hope that my comments and suggestions will be helpful in preparing a better and more acceptable alternative than Alternative B, or any of the other alternatives for that matter. Please send me a copy of the final EIS and Record of Decision.

Sincerely,
William J. Barmore, Jr.
William J. Barmore, Jr.

[illegible]
Page 2. Winter use carrying capacity is mentioned in a very key context in the DEIS. On page 25, carrying capacities must be determined as a feature of any alternative that might be selected. Owing to court settlement time frames, NPS did not feel that such a complex task could be completed in association with the EIS and that the appropriate context for such a determination would be after a decision is made on the winter program.
Page 2. Alternative formulation in this effort is highly complex. Many suggestions for alternatives or alternative features were made in the thousands of comments received. A great deal of criticism was leveled at the current range of alternatives because people did not like the way features were "mixed." At the same time, many people focused on features of alternatives that they liked, and features to which they were opposed. It is clear that for such complex issues there could be an infinite number of possible alternatives. CEQ states that in such instances, the agency need only consider a reasonable number of examples that cover the full spectrum of possible alternatives that meet the purpose and need (Question 1b, CEQ 40 Most-Asked Questions). What constitutes a reasonable range depends on the nature of the proposal and the facts in each case, where the proposal is at the discretion of the agency. The final selected alternative that is to be documented in a record of decision may mix features from the range of alternatives evaluated in the final EIS. Such mixing can occur as long as the mixed features are consistent with one another, and as long as the features and their effects would not fall outside the range of alternatives disclosed in the EIS (§1505.1(e)). A finding as to that circumstance would be entirely appropriate in the record of decision, along with the rationale, should the selected alternative not precisely correspond with one of the "mixes" evaluated in detail.
Many comments on pages 4-19 of the letter refer to incorrect terminology, minor clarifications, suggestions about wording, typographic errors, etc. Some comments crosswalk into more substantive issues responded to above. Others may be dismissed by virtue of the level of analysis that is appropriate in this programmatic EIS, versus a more site-specific analysis. Overall, these comments are helpful and each will be considered and incorporated as needed. NPS feels that there is no need to respond individually to these types of comments, beyond this statement.

505 Ponderosa Dr.
Jackson, WY 83001
[redacted]
November, 1999

Mr. Hawkes,

Comments regarding Winter Use Plan DEIS for Yellowstone & Grand Teton Nat'l Parks & J.D. Rockefeller, Jr. Memorial Parkway

My remarks should be prefaced by the fact that I cannot specifically choose one of the stated alternatives in the printed plan document. My pursuit would be to encourage an amalgamation of several specifics listed in a variety of the plan alternatives. Further, I live in the Jackson area, so I would perceive that I am very familiar with the political/geographical and economic issues surrounding the necessity of the WUP. I have made comments previously, and have been a co-plaintiff on the Fund For Animals lawsuit. I feel very qualified to make important comments for consideration in resolving this matter.

I cannot support any of the alternatives as they are currently compiled. I would like to point out the particular items of import be they good or bad. They are as follows...

Good initiatives to pursue:

1. The increase of interpretive opportunities(YNP)
2. Prohibit oversnow travel, from 9pm to 6am(YNP)
3. Allow only all-wheeled vehicles or treaded snow coaches fm. W. Yellowstone to Old Faithful
4. Continue scientific studies, especially of bison migration routes(YNP). YNP's Supt. should recognize the judge's ruling in the case with the FFA & close areas for study as required. He shouldn't be allowed to choose which rulings he wishes to comply with.
5. Separate motorized & non-motorized traffic. There is currently gross abuse of the requirement that snowmobiles not use the public roadbed, which ought to be enforced.
6. Phase out snowmobiles, snowplanes from the Potholes as well as Jackson & Jenny Lakes, ASAP.
7. As soon as EPA has new snowmobile standards, adopt them without delay. The industry could make them quieter(60db max) & more efficient but hasn't. Users will have to subordinate their recreation to the park's needs. Abruptly shut down snowmobile access in 2 yrs. to any machinery that does not comply with EPA or park mandated standards. Special dispensation allowed for snowcoaches, but they too should be disallowed within 5 yrs. if standards are not met.(YNP, GTNP)
8. Designated winter range should only be for non-motorized access, if that. Minimally invasive access should be allowed whenever possible.(YNP, GTNP)
9. The CDST should be closed in both parks. Only shuttle operations should be allowed to get people to points in those parks.
10. Establish winter campsites at Old Faithful.
11. Establish an advisory committee. Select not just gateway community officials or enviro

types, but individual citizens familiar with the local & geo-political dynamics.(YNP, GTNP)
12. Step up enforcement of any speed limits, safety violations, outfitter violations, etc.(YNP, GTNP)
13. Mitigate, but don't hesitate to terminate, if wildlife & environmental protections aren't observed stringently. YNP & GTNP should be Class One air quality areas at all times. Steps should be undertaken to that end for summer private & commercial vehicle access. If a state does not have a vehicle inspection law that includes emission standards, then vehicles with license plates from those states should be denied access or charged appropriately higher entrance fees. That includes Wyoming, which currently does not have such a law for vehicle inspections at all.
14. Regrettable, but close the east entrance in winter.

Bad, do not pursue:
1. Establishment of more new snowmobile trails. Any new non-motorized trails should only be in non-invasive, wildlife friendly areas.
2. Any speeds for motorized vehicles over 35mph.
3. Plowed roads
4. No new CDST pathways
5. Continuance of vehicles with 2-stroke engines
6. No new staging areas/jumping off points to the south for snowmobile access. While I am not fond of the Flagg Ranch operation, I do not think that Vail Assoc. should be given preferential treatment over their long-term operation at Flagg, with a new level of facilities at Colter Bay. I do not wish to see a new pall of exhaust emanating from N. GTNP.
7. No plowing, minimized grooming of roads to preclude bison migration along roadbeds to exit the park and be killed.

Misc. Other
1. I don't understand the section, "Species of Special Concern" under Alt. F. Since when are trumpeter swans present in YNP in winter? Most have migrated to Jackson in early winter & fly further south as soon as the waters of Flat Creek freeze up.
2. I did not see any reference to any studies regarding carrying capacities of YNP as regards its wildlife charges. Further studies of their needs vrs. the wants of the general public, should be made & implemented. The public should never routinely be denied access, only as natural resources mgmt. dictates. And this does NOT apply to mgmt. designed to provide hunters and outfitters the increased ability to kill wildlife as a result of park pursuits.

Philosophically, it is not reasonable to assume that snowmachines can be eliminated from the park, at least not in the near term. I would very much like to see serious studies regarding mass transit, people movers(monorail), access reservations, etc., for both summer and winter, but especially now for winter access.

I would like to commend the park staffers, especially in light of direct criticisms, for their efforts in preparing the DEIS. Mistakes will often be made, so long as they aren't malicious to either side, but bring focus on the true problems our parks are facing.

I disagree with my friends at the FFA regarding the level of closure of YNP. I do not wish to see snowmobiles in the park any longer. Their irresponsible riders, pollution(noise & emission), the harassment of wildlife, the endangerment of park employees, their damage of natural resources, their danger to one another, etc., are all items that must be corrected for the future well being of our natural heritage. However, winter access must be maintained for as many as facilities can accommodate, especially by means of mass transit. Perhaps one passenger access would have to be accommodated only by specially granted permits, even in summer.

In determining the preferred alternative for YNP or GTNP, the economic hardships presented to gateway communities, should not be the(or a consequential) determining factor. It will always be a political factor that must be considered, as politely & as minimally as possible. The NPS should only consider what is good & proper for the parks. That the gateway communities have been able to profit from their proximity to the parks all these years is fortunate for them. However, their prior good fortune can't be the yardstick for which future decisions for the parks are made. They will adapt. Outfitters will fall back, regroup, & eventually find a new way to profit from whatever position is adopted. The parks do NOT OWE them a living.

References in the options to clean air, solitude, quiet, safety, resource preservation, etc., should be the principal "driving" factors in NPS's decision of alternatives.

Thank you,

Walt Farmer

Pages 1-2 Re: Good initiatives to pursue and bad initiative not to pursue. Alternative formulation in this effort is highly complex. Many suggestions for alternatives or alternative features were made in the thousands of comments received. A great deal of criticism was leveled at the current range of alternatives because people did not like the way features were "mixed." At the same time, many people focused on features of alternatives that they liked, and features to which they were opposed. It is clear that for such complex issues there could be an infinite number of possible alternatives. CEQ states that in such instances, the agency need only consider a reasonable number of examples that cover the full spectrum of possible alternatives that meet the purpose and need (Question 1b, CEQ 40 Most-Asked Questions). What constitutes a reasonable range depends on the nature of the proposal and the facts in each case, where the proposal is at the discretion of the agency.

The final selected alternative that is to be documented in a record of decision may mix features from the range of alternatives evaluated in the final EIS. Such mixing can occur as long as the mixed features are consistent with one another, and as long as the features and their effects would not fall outside the range of alternatives disclosed in the EIS (§1505.1(e)). A finding as to that circumstance would be entirely appropriate in the record of decision, along with the rationale, should the selected alternative not precisely correspond with one of the "mixes" evaluated in detail.

Conclusions drawn by commenters on "good" features versus "bad" features may be helpful to the decision maker. However, absent any rationale that would indicate a feature is not possible, all features will remain in the range of alternatives available for the decision. Most actions that are entertained within the range of alternatives have consequences one way or another, and these are disclosed to the necessary degree in the EIS.

Page 2. Re: Species of special concern. Please see page 125 in the DEIS. The species and its presence are of sufficient concern to address possible impacts.

Page 2. Re: Reference to studies regarding carrying capacity. Work accomplished by biologists on defining the wildlife affected environment and the effects of winter use on it are cognizant of the carrying capacity issue. Such determinations include many factors other than those associated with winter use. For this reason, NPS holds to its determination that setting, or determining, carrying capacities is beyond the scope of this effort (see page 16 in the DEIS). Steps are being taken to make the winter use EIS analysis as consistent as possible with that of the Bison EIS/Plan. NPS will clarify this issue as much as possible in the final document.

Pages 2-3. Re: Impacts of snowmobiles, and issues relating to safety, wildlife, natural resource damage, etc, are disclosed in the DEIS. The reader can note the differences in impact between the current condition (alternative A) and other alternatives that limit or eliminate snowmobile access in various areas of the parks. Alternative G provides for oversnow mass-transit access only. NPS feels that access to the national parks is a key element in the purpose and need for action, which is the major reason why total closure to motorized vehicles in the winter was considered but eliminated from detailed study.

Page 4. Re: Economic hardships to gateway communities should not be determining factor. The EIS presents a fair disclosure of impacts of winter use alternatives, including social and economic effects. There is no emphasis from NPS on economic impacts; the document and the process fulfil NEPA analysis requirements. It should be pointed out that cooperating agencies – primarily state and local government – are chiefly concerned about economic impacts on local communities and such concerns have been given due consideration. NPS is not responsible for the economic viability of the surrounding areas, but what NPS might propose to do is certainly an issue that must be addressed in the EIS. Consideration of impacts and other factors is in the purview of the decision maker, who will select an alternative and provide rationale for that selection in a record of decision. If certain uses are determined in the EIS to cause adverse impacts on park resources and values, and if it is further determined by the decision maker that such impacts are contrary to law, executive order, regulation and policy, then action must be taken. Mitigation that is necessary to reduce an impact to the appropriate level, or elimination to get rid of the impact entirely, could cause economic effects in local communities. NPS maintains that the proximity of such communities to the parks will always represent opportunities as well as risks for local businesses.

Mr. Clifford Hawkes
National Park Service
Denver Service Center
12795 West Alameda Parkway
Lakewood, CO 80228

Nov. 29, 1999

Dear Mr. Hawkes:

Attached are my comments concerning the Winter Use Plan for Yellowstone and Grand Teton National Parks. I oppose the preferred alternative that will plow the road from West Yellowstone to Old Faithful. I suspect most people believe, as I do, that winter activities are an integral part of the visitor experience in Yellowstone N.P. and that we should be able to choose the type of vehicle access that best meets our individual needs, whether that be as a family or an individual.

I support reasonable regulation of snowmobiles for emissions and noise. In this regard I favor the EPA's process in this effort. The NPS, whose expertise is not motorized emissions, should follow EPA guidelines when they are developed. It is obvious from the release of a flawed study on snowmobile emissions by Yellowstone N.P. officials that they are biased against snowmobiles and are incapable of making a fair, objective decision.

I also support keeping the entire Grand Loop open for snowmobile use. This is a one-of-its-kind experience for snowmobilers which offers a continuous outing without back tracking.

I especially oppose busing from West Yellowstone to Old Faithful. I would not enjoy such a ride and would not use it. Busing also does not take into account the economies of surrounding communities. The NPS helped create a healthy, viable snowmobile industry in West Yellowstone and cannot arbitrarily eliminate that use now.

Instead of your preferred Alternative B I support a modification of Alternative E that, in addition to adaptive planning, keeps the Grand Loop open to snowmobiling, with access from all current entrances; provides reasonable regulations for snowmobile emissions and noise; does not plow the road from West Yellowstone to Old Faithful; and provides the groomed snowmobile routes currently available in GTNP.

SPECIFIC COMMENTS

1. Existing Condition,Pg. 4. I believe there is a major issue missing here. That is: support for local communities. Public land, including national parks, play an important role in maintaining and supporting local communities, both economically and socially. Congress spends considerable time through oversight hearings emphasizing this point. Economic impact has been a major point of contention from both West Yellowstone and Cody, as well as the adjacent counties of Fremont Co. ID., Gallatin and Park Counties MT, and Park and Teton Counties WY, and the States of Idaho, Montana and Wyoming. Yet economics is not a major issue in the document. This is an obvious error in the document.

Page 7 states "Community expectations for winter visitor use in and around the parks represent a part of the context for these issues and concerns." But community support is much more than "context." It is as much a part of the fabric of this area as visitor use or resource protection.

The top of page 14 defines an issue as "a point of contention about the specific possible environmental effect of a specific management action or program." There is a definite point of contention between the towns, counties and states in and around YNP and the proposed actions in this document.

Therefore, support for local communities should be added as an issue so its importance can be assessed along with other important issues.

2. Social and Economic Issues, Pg. 15. This is further evidence that support for local communities should be a major issue to be addressed in the existing condition.

3. NEPA, Pg. 17. The agency must, as it states in the document, develop alternatives that address the purpose and need for action. While the responsible official has discretion to limit the scope of analysis, he must

be careful not to do so in an arbitrary and capricious manner. As I understand it this means the agency may not ignore important information that is pertinent to the decision simply because that information is not consistent with the selected choice.

4. Formulation of Alternatives, Pg. 21. According to the text here, alternatives were developed in response to the major issues and concerns raised through public and internal scoping. However, in looking through the alternatives I see none that address the issue of support for local communities. If support for local communities is a major issue, as I believe it is, there should be an alternative that best supports the local communities surrounding YNP. There is none!

5. Effects of Alternatives, beginning on Pg. 157. Alt. B estimates the total economic output in the 17-county GYA area will be reduced by $12.4 million, with an additional loss of 301 jobs related to reduced nonresident expenditures (pg. 198).

In addition there will be a loss of $14.7 million in regional expenditures and 357 jobs in the 3-state area as a result of this proposal.

Further, the freedom to choose the type of transportation to use will be eliminated between West Yellowstone and Old Faithful, as will the opportunity to ride the Grand Loop be foregone. Instead, people will be forced to ride the bus to get to Old Faithful.

Alternative B will also result in more elk, bison and deer colliding with wheeled vehicles on plowed roads, resulting in more animals being killed.

So what benefits will accrue to the American public to offset these obvious negative effects? From reading the document we learn water and air pollution will decrease and noise levels will decline.

However, noise is not critical to those riding on snowmobiles, snowcoaches or buses since they are riding on/in a noisy vehicle anyway. Noise is critical to nonmotorized users like cross-country skiers and snow shoe hikers. At a fairly moderate pace of 2 mi./hour these people can be in a negligible noise range in 20 minutes (assuming a 5 snowmobile group in a middleground setting) and consequently in a naturally quiet area. Here they can stay all day enjoying the quiet, returning only at night fall.

Less than 1% of the winter recreational visitors entering through West Yellowstone are cross-country skiers however (Pg. 217). And they can be out of range of motorized sound in roughly 20 minutes. In the case of noise, therefore, the benefit to the many (snowmobilers) outweighs the benefits to the few (skiers).

As for air pollution, air quality standards are occasionally exceeded on high snowmobile days at the West Entrance and Old Faithful corridor in YNP and at Flagg Ranch in GTNP (Pg. 94). For the most part air quality is good and there is no evidence of people getting sick from air pollution, other than an occasional employee at West entrance. Presumably this situation could be mitigated by limiting exposure and by moving the check point out from under the enclosed entrance at West where fumes can be trapped.

Water pollution may occur from snowmobile use. Samples found high levels of ammonia and sulfate in the snowpack along groomed roads (Pg. 180). However, there is no scientific evidence that these pollutants make their way into streams, or even if they do, the pollutants have an effect on fish or wildlife. The effect of 2-stroke engine emission deposits along groomed park roads is, in fact, unknown (Pg. 180).

In summary, preferred Alt. B will result in the loss of millions of dollars to local communities and the tri-state area; will deprive people of the choice of which equipment to use, and where they can use it; and will result in greater loss of elk, bison and deer. In exchange, only 1% of the winter visitors will benefit from the lower noise level; air pollution, which is concentrated in only a few areas on the highest use days, will be minimally improved; and the effects of water pollution are hypothetical and unknown. How the agency can conclude this is the best alternative is beyond me.

PREFERRED ALTERNATIVE

Instead of Alt. B I prefer Alt. E, modified to 1) eliminate plowing of the road from West Yellowstone to Old Faithful, 2) eliminate busing from West Yellowstone to Old Faithful, 3) keep the Grand Loop open to snowmobiles, including access from all existing entrances; and 4) provide the groomed snowmobile routes currently available in GTNP.

That concludes my comments. Thank you for the opportunity to comment on the proposed Winter Plan for Yellowstone and Grand Teton National parks. I urge you to not eliminate an important part of the Yellowstone experience by plowing the road to Old Faithful. This would truly ruin the winter experience for me and my family.

Respectfully,

Jim Gerber

JIM GERBER
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St. Anthony, ID 83445
[redacted]

Page 1. Re: Opposition to alternative B. Under the CEQ regulations, the requirement in an EIS is to provide a range of reasonable alternatives that clearly define the issues, and to fully evaluate and disclose the possible effects of those alternatives. The DEIS meets this requirement, while acknowledging that the commenter disagrees about many of the impacts disclosed. In general, the expressions of opposition relate to the decision that the commenter would like to see NPS make, based on myriad disagreements about the effects disclosed in the DEIS. The general response to such comments is that the commenter's opinions will be considered in making the final decision, but that there is nothing in those opinions that substantively would alter the range of alternative features to be evaluated in the Final EIS. For example, if the features that are not supported were to be deleted from the range of alternatives then the analysis would be left only with features that the commenter likes or agrees with. If only the actions that are liked by the commenter remain, then there is effectively only one alternative. Therefore, expressions of support or objection will not be responded to, in general, by changes in alternative features – they will be responded to when the decision criteria are developed, and accordingly, when the rationale for the decision is presented in the Record of Decision. People who commented in this fashion are asked to consider that there is a very clear separation between alternatives legitimately considered in an analysis and the expression of a preferred alternative or the decision to be made.
Page 1. Re: Personal freedom of access. Please see the purpose and need section in the DEIS and the FEIS. Personal access may be reflected in the statements of desired condition, but personal access by snowmobile is not a right or a guarantee. The NPS mandate, as stated in the purpose and need section, places personal enjoyment and freedom of access in a subordinate role to protection of park values so they are unimpaired for future generations. All alternatives but one in the EIS allow the use of snowmobiles in varying degrees and places, depending upon the alternative concept. The impact of each alternative on visitor experience is disclosed, including impacts on snowmobile users as a group. The difficulty is that personal access via snowmobile, considering present commercial technology and usage, causes a variety of impacts on park resources, values and other visitors.
Page 1. Re: Grand Loop experience. Several alternatives (A, D, and E) propose maintaining the sections of road known as the Grand Loop for snowmobile use. Other alternatives propose that road plowing or closures occur on sections of the Grand Loop. The effects of road plowing and closures on visitor experience proposed in these alternatives are disclosed in Chapter IV of the DEIS. Please see response to this letter in regard to page 1 "Oppositions to alternative B."
Page 1. Re: Economies of local communities. Please see response to this letter in regard to page 1 "Oppositions to alternative B." Your comment is correct in that the NPS cannot arbitrarily eliminate snowmobile use in the parks. However, basing a decision as you suggest, on the fact that local communities rely on snowmobiling for economic viability without an examination of other alternatives and their effects on park resources would certainly be arbitrary. The NPS is involved in a lengthy and detailed process that is designed to ensure that arbitrary decisions are not made. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences and take actions that protect, enhance and restore the environment (§1500.1).
Page 1-2. Re: Support of Revised Alternative E. The alternative feature suggested in this comment are all components of alternative E as presented in the DEIS pages 34-35.
Page 2. Re: Omission of socioeconomic issue. The commenter is referred to pages 13 and 14 where social and economic topics are identified as major issues and to the corresponding discussions presented in Chapters III and IV.
Page 2. Re: Formulation of alternatives. In October of 1998 representatives from the 3 states and 5 counties that are designated as cooperating agencies met in Idaho Falls, ID to share their ideas for alternatives to be presented in the Winter Use DEIS. (Please see Volume II Appendix A for a complete list of ideas generated at that workshop). A review of the ideas generated at that workshop indicate that maintaining or adding opportunities for winter recreation while protecting the park's natural resources were most important to the cooperating agencies. Alternatives A, C, D and E reflect these concerns. The overwhelming support for Revised Alternative E indicates that at least one alternative was proposed in the DEIS that, with a few minor modifications, would meet the needs and interests of the cooperating agencies. This alternative will remain in the range of options the decision-maker may consider when making his or her decision.

JIM GERBER
As an aside, the final selected alternative may mix features from the range of alternatives evaluated in the final EIS. Such mixing can occur as long as the features are consistent with one another, and as long as the effects of such an alternative would not fall outside the range of effects disclosed in the EIS.
Page 2. Effects of alternative B. This comment restates the disclosure of effects present in the DEIS. Readers should understand that it is the purpose of an EIS to disclose the possible effects of a proposed action and alternatives to it.
Page 2. These comments restate the disclosure of effects present in the DEIS. It should be noted that many interested parties commented during scoping and during the DEIS review that snowmobiles produce unwanted noise, air pollution and water pollution. The impacts of human winter use activities on the natural soundscape, air quality and water quality will be enhanced in the FEIS.

Mr. Clifford Hawkes
Winter Use Plan Draft EIS
12795 East Alameda Parkway
Lakewood, CO 80228

November 26, 1999

Dear Mr. Hawkes:

We are writing today in response to the draft Winter Use Plan Draft Environmental Impact Statement (EIS) for the Yellowstone National Park, Grand Teton National Park and the John D. Rockefeller Memorial Parkway.

We recognize that the National Park Service has the dichotomous mission of both protecting the resources and providing for the benefit and enjoyment of the people. This is clearly articulated in the act authorizing the establishment of Yellowstone National Park in 1872. This balance between access and protection has been confirmed in subsequent pieces of legislation although over the years more emphasis has been placed on the preservation aspect of the mission. Nonetheless, the National Park Service (NPS) has an statutory obligation to incorporate sound management practices that will protect the resources and provide for the benefit and enjoyment of the people. Many people interpret the "benefit" language to mean that it is part of the NPS mission to provide economic opportunity so long as those opportunities do not pose long term detrimental impacts on the Park resources. It is on the basis of enjoyment and economic benefits that the 5 counties adjoining Yellowstone and Grand Teton National Parks were granted cooperating agency status in the Winter Use Plan Draft EIS with the specific purpose of providing guidance for consideration of the socio-economic impacts of the various alternatives as provided under the National Environmental Policy Act (NEPA).

We believe that the scientific arguments regarding adverse effects of winter use are inconclusive and in many cases overstated. Much of the document is based on junk science and research resulting in most effects being characterized "…may…" occur. Therefore, there are no compelling reasons for major changes in winter use management. While Yellowstone National Park (YNP) winter visitations grew much faster than projected in the early 1990's, that rate of YNP growth has not only leveled off, but visitations have declined over the past few years according to YNP entrance data.

While 2 cycle snow machines are louder and do have higher emission levels, there is absolutely no evidence to support that emissions have had any adverse impact on wildlife or any non-human life form in Yellowstone. In fact, wildlife populations have flourished in Yellowstone

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and the issue regarding Bison Management is solely due to conflicting federal agency missions and policies and the subsequent need to control the spread of brucellosis. Cleaner and quieter snow machines are being developed. Stricter emission standards will no doubt be established by the Environmental Protection Agency and the NPS can require lower sound levels. There is a long history of the tourism industry responding to the needs of the NPS and we believe that the industry is responding to the current issues of noise and emissions in a responsible and feasible manner.

No matter what the final Record of Decision regarding the Winter Use Plan Draft EIS, it is imperative that any proposed actions be limited to impacting winter use only and within the boundaries of Yellowstone and Grand Teton National Parks and the John D. Rockefeller Memorial Parkway. No part of the Winter Use Plan Draft EIS can or should be used to alter summer, shoulder season management actions or plans and the management actions must be limited in geographic scope to the Yellowstone and Grand Teton National Parks and the John D. Rockefeller Memorial Parkway.

It is an excellent concept to establish the carrying capacity for various human uses of the Yellowstone and Grand Teton National Parks and the John D. Rockefeller Memorial Parkway, but the NPS would be remiss if it does not consider establishing carrying capacity for wildlife as well. Future management decisions and indeed the Buffalo management issue that led to the lawsuit and ultimately the draft Winter Use Plan Draft EIS must be based on sound science, reviewed by peer groups, and that includes understanding the different carrying capacity of the Parks for various kinds of wildlife. Amid all the rhetoric regarding snowmobiles and their use in the National Parks it must be remembered that despite the fact that snowmobile emission particulate matter has been detected in snow and water, there has been absolutely no evidence that this particulate matter has adversely affected any biological life forms in the Parks.

It is important to note that historically it was Yellowstone National Park that encouraged the industry and surrounding communities to move in the direction of snowmobiles and snowcoaches because in their wisdom, it was determined at the time that plowing roads inside Yellowstone was neither practical or would it provide a quality visitor experience. There are no compelling reasons to believe that the rationale against plowing the roads in the winter has changed.

Affordable access from West Yellowstone, MT to Old Faithful is a bogus issue since it ignores the cost of getting to West Yellowstone, MT. Moreover, summer visitations are the most affordable, yet the demographics between summer and winter visitors are virtually the same.

The Winter Use Plan Draft EIS proposes a range of alternatives ranging from "No Action" to "Highly Restrictive". We believe that none of the proposed alternatives is fully acceptable. The

NEPA process does, however, specifically provide for various components from any of the alternatives to be re-combined to form a new preferred alternative.

Preferred Alternative B of the Winter Use Plan Draft EIS

Wildlife -- Plowing the road from West Yellowstone to Old Faithful will disrupt wildlife migration patterns by both impeding and facilitating wildlife migration. Interim studies have confirmed that Bison migrate where they please and that they do not necessarily take the path of least resistance. Nonetheless, a plowed road offers even less resistance than a groomed snowmobile trail and therefore may facilitate more Bison migration to the Yellowstone Boundary. It is also true that a plowed road will substantially impede migration across the road corridor by building up large snow walls of packed ice and snow that would be difficult for wildlife to traverse. It is not feasible to cut opening through these snow walls without having heavy equipment leaving the road way and encroaching on sensitive areas.

Economics -- Many counties surrounding the Yellowstone/Grand Teton areas requested cooperating agency status in the development of the Winter Use Plan Draft EIS. The NPS denied cooperating agency status to all counties except those that adjoined Yellowstone or Grand Teton on the basis that only adjoining counties were substantially impacted economically by NPS actions.

Consistent with their responsibility as a cooperating agency, the 5 adjoining counties developed data to document the economic impact of winter use. In the Winter Use Plan Draft EIS, this economic impact is then compared to the total economic activity of 17 counties surrounding the Yellowstone/Grand Teton area. The net effect of this contradictory comparison is to dilute the economic impact resulting from actions taken by the NPS. This is not only a statistically invalid analysis, it is patently unfair. The Winter Use Plan Draft EIS does not adequately take into account the cultural or economic significance of the Lower Loop of the Yellowstone Grand Loop. If the Preferred Alternative B is implemented then the integrity of the Loop is violated and this will have a dramatic impact on the number of winter visitors. There will also be significant socio-economic impacts on the East Entrance by eliminating access by snowmobile to West Yellowstone on Super Bowl Sunday and Presidents Day Weekend.

Budgetary -- The Winter Use Plan Draft EIS does not address the significant costs of plowing the road from West Yellowstone to Old Faithful. There is no data relative to either the average or the extreme snow fall in the Firehole/Madison River basins and, therefore,. no quantifiable way to estimate of equipment and labor costs.

Public Safety -- Public safety is not adequately addressed in the Preferred Alternative B. Visitor experience and safety should be issues of primary concern to the NPS, yet increased enforcement

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of speed limits is not identified as a critical need. Co-mingling of snowmobiles and automobiles along the Wyoming Continental Divide Snowmobile Trail on the John D. Rockefeller Memorial Parkway has long proven to be a significant traffic hazard that is ignored in the Preferred Alternative B. Night time closures of the Parks to snowmobile travel would significantly reduce the number of accidents and improve the quality of the grooming buy allowing the snow to settle overnight thus improving the visitor experience and safety.

Air Quality – Air quality data was only collected at the West Entrance and along the West Yellowstone, MT to Old Faithful corridor and at the West Entrance air samples were collected for only 4 days. It has been suggested that radio transmissions from the West Entrance altered the air quality monitors and the readings at that entrance. No attempt was made to determine what component of air pollution was due to wood stoves and fire places versus snow machines and none of the data collection practices were reviewed by peer groups in that field. Even with these errors, the air quality at the West Entrance was never shown to be worse than the federal air quality standards and only exceeded Montana's standards during the morning hours (8-10 AM) when YNP shows that about one-third of the daily traffic volume entered Yellowstone National Park.

Federal and state air quality standards are measured in average parts per million (ppm) over 1 hour and 8 hour periods only. The air samples collected in the West Yellowstone, MT to Old Faithful corridors were shown to have exceeded federal standards during 3 different time periods. Two of these time periods were less than one hour and therefore it is impossible to say that the air quality did not meet the federal standards for the required one hour average measurement time.

The Preferred Alternative B fails to recommend several easy ways to mitigate emission problems associated with backed up traffic at the West Entrance such as the advanced sale of passes at outlets in West Yellowstone or through outfitters. The is no analysis of how the significant emissions from diesel buses that overnight at Old Faithful will affect air quality. During times of extreme cold, which are fairly frequent for Old Faithful, buses will either have to run all night or belch out huge volumes of smoke when started cold in the mornings. The EPA is currently reviewing and setting emission standards for all off-road vehicles. Certainly, they have the resources, knowledge and authority to address air quality issues and the NPS ought to leave that in the EPA's hands. The recent press release from Yellowstone, reported air quality findings that should have been part of the Winter Use Plan Draft EIS, but despite this late information there is still no evidence whatsoever to suggest that emissions have adversely affected any form of biological life in Yellowstone.

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County Commissioners Revised Alternative E

The 5 Cooperating Counties reviewed all the Alternatives and rejected the Preferred Alternative B. They established a set of guiding principles that address issues such as protection of the resources, wildlife, reduced congestion, improved visitor experience, adaptive management, air quality, sound levels, carrying capacity and the local economies. In adherence to these principles the Cooperating Counties started with Alternative E and revised it by eliminating some of the management options and inserting others. The County Commissioners Revised Alternative E enjoys wide spread public and organizational support and is endorsed by the National Association of Counties – Western Interstate Region and the Wyoming County Commissioners Association.

Adaptive Management – Good science provides for flexible management based on sound scientific research that is reviewed by legitimate peer groups. It is clear from reading the Winter Use Plan Draft EIS that the scientific community has had neither the opportunity to conduct thorough research, draw conclusions or let that research be reviewed by their peers. Good management needs good science and Adaptive Management can allow the NPS to implement management recommendations based on peer reviewed science as that information becomes available.

Cooperative Advisory Committee – This Winter Use Plan Draft EIS is the result of a settlement of a lawsuit brought against the NPS by the Fund for Animals. Clearly, Yellowstone and Grand Teton Parks have a wide ranging constituency and lawsuits appear to be the preferred mechanism for any group to force its desires upon the NPS. A well balanced, interdisciplinary Federal Advisory Committee could lead to consensus based management recommendations.

Visitor Capacity -- Before any sound management decisions can be made about appropriate levels of winter use the NPS must establish the winter use carrying capacity for each NPS Unit and the carrying capacity must be based on sound, peer reviewed science and quantifiable data. The winter use carrying capacity study will provide guidelines that will lead to sound management decisions, but any winter use carrying capacity data must not be applied to summer visitations or visitor management.

Public Safety -- By enforcing speed limits, closing the roads at night from 10:00 PM to 6:00 AM, when most accidents occur, and separating wheeled vehicles for snowmobiles on the Wyoming Continental Divide Snowmobile Trail, public safety will be substantially enhanced. The visitor experience will be improved by the nightly closure which will allowed freshly groomed trails to settle before traffic begins the next morning. The nightly closure will also make grooming safer and more efficient.

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Budgetary – In our estimation, the cost of implementing County Commissioner's Revised Alternative E will be substantially less and more predictable than costs the Preferred Alternative B.

Air Quality – Air quality at the West Entrance could be easily and immediately mitigated by pre-selling Park Passes to improve traffic flow through the entrances, by requiring bio based fuels and synthetic oils be sold inside the Parks and used by rental/guide operators. The snowmobile industry can reduce emissions by as much as 76% applying fuel injection technology already in use in watercraft 2 cycle engines. By deferring the establishment of emission standards for snowmobiles to the federal Environmental Protection Agency, the industry will be able to invest its technology dollars to meet standards that will be applied uniformly across the country.

Sound Levels – By allowing the "Federal Advisory Committee" to set reasonable and achievable sound level regulations, the NPS can be assured of prompter and more complete compliance.

Visitor Experience -- More dispersed use will reduced visitor conflicts by making more non-motorized use areas accessible via snow coach shuttles, expanding non-motorized areas inside Grand Teton National Park and by maintaining wheeled vehicle access to Mammoth, Roosevelt Lodge, and the NE Entrance/Cooke City area. Park Winter Use Surveys demonstrate that the greatest source of negative visitor experience is because diverse interests are forced to share the same areas without regard for the conflicts.

Affordable Access – Affordable access will continue to be assured by maintaining wheeled vehicle access through North Entrance to the NE Entrance. In fact, this access would be even more affordable since it does not require the visitor to pay any shuttle bus fee to traverse Yellowstone.

Economics – In our opinion. The adverse socio-economic impacts resulting form the implementation of the County Commissioner's Revised Alternative E would be minimal.

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Conclusion

We very much believes that the wildlife, natural resources and cultural assets of the Yellowstone/Grand Teton areas need to be adequately protected to insure the enjoyment by future generations of people. At the same time, we believe that balanced, well managed access by the public can make these areas accessible, and therefore enjoyable, as well as providing for the adequate protection of these priceless resources.

We strongly opposes the Preferred Alternative B. We very much support the adoption of the County Commissioner's Revised Alternative E and we strongly recommend it be incorporated into the Winter Use Plan Final EIS and made the Preferred Alternative in the Record of Decision.

Best regards,

Paul & Lisa Hoffman

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Page 1. Re: Park mission. The mission is clear that if adverse resource impacts are occurring that would compromise the protection of park values, then some management must occur to eliminate the source of impact. Balancing use with protection does not mean that impairment of park values and resources is acceptable. It is the purpose of the winter use EIS to assess the impacts and provide a basis for determining the level of use that is consistent with park service mandates, executive orders, and regulations. The cooperating counties were not granted cooperating agency status on the basis of enjoyment and economic benefits. Cooperating agency status is based on their professed special expertise in social and economic analysis that is appropriate to conducting an EIS.
Page 1. Re: Junk science. NPS disagrees with the commenter's conclusion that the document is based on "junk science." Commenter offers no evidence for this conclusion. On the other hand, EPA notes that the document has a very strong basis in science. Compelling reasons for performing an analysis of winter use are presented in the DEIS in the purpose and need section. Clearly, the commenter disagrees with the purpose and need for action.
Page 1. Re: YNP winter visitations. Comment about declining use numbers begs the issue of the impacts associated with this type of use (it is understood that commenter is referring to snowmobile use).
Page 1. Re: No evidence supports emissions cause adverse impact on wildlife. DEIS has not made the claim that emissions affect wildlife.
Page 2. Re: Decision to be made. It is implicit in the DEIS from the alternatives and from the analysis that the decision to be made will involve only winter use and only lands within the three park units. Impacts analysis includes effects on adjacent lands, and cumulative effects that might go beyond the parks – in accordance with CEQ regulations. However, to be absolutely clear about the decision to be made, a section will be added to the FEIS.
Page 2. Re: Establishing carrying capacity. Establishing a recreation carrying capacity is an action associated with all DEIS alternatives. As stated in the DEIS, page 16, establishing a carrying capacity for wildlife is outside the scope of analysis for winter use. It would seem that the Bison EIS/Plan would be a more appropriate place in which to deal with bison population issues. Any decisions from the Bison EIS/Plan and the Winter Use EIS must be consistent.
Page 2. Re: No evidence that particulate matter has adversely impacted biological life forms in the Parks. The DEIS makes no definitive statements to the contrary. However, additional studies of snowpacks have been completed and are available for use in the FEIS.
Page 2. Re: Historically, YNP encouraged surrounding communities and industry to direct efforts towards snowmobiles and snowcoaches. There are compelling reasons to perform an analysis of impacts associated with all possible and reasonable approaches to identified issues. Conditions change, issues arise, and management needs change over time.
Page 2. Re: Affordable access. NPS disagrees. Affordable access is an issue – but it may not weigh heavily in the eventual decision. As an aside, it seems there is always a great deal of local public consternation and discussion whenever fees for use of public lands are proposed or increased. We believe the cost of access through the gate is an important consideration.
Page 3. Re: Impacts on wildlife due to plowing. Impacts on wildlife are disclosed for all alternatives, including alternative B. The Park Service's assessment of impacts is at variance with commenter's opinion; "snow walls" would be more like berms, and they would not be insurmountable barriers over the entire plowed road distance. Rationale for this comment argues against plowing many of the roads that are currently plowed in parks and on adjacent lands in the GYA.
Page 3. Re: Dilution of economic impacts. The Park Service's economic consultant will run the economic model for the 5-county area around the park gateways at issue.
Page 3. Re: Cultural or economic significance of the Lower Loop of the Grand Loop. The DEIS (page 220) discloses this impact. Park County Wyoming – as a cooperating agency with special expertise in socio-economic analysis – has not provided the Park Service with any data that expresses the significance of impacts on the East Entrance. Commenter offers no information that would substantiate this claim. NPS does not argue that this alternative feature would affect the experience and the opportunity and it has disclosed the impact in those terms.
Page 3. Re: DEIS does not address plowing costs on the road from West Yellowstone to Old Faithful. The costs are estimated in Appendix F of the DEIS. The basis for estimates relates to average unit costs for performing the types of activities included in each alternative. This analysis is deemed sufficient to be

[illegible]
able to compare the relative costs between alternatives.
Pages 3-4. Re: Public safety. The impacts of all alternatives on public safety are disclosed in the document. The Park Service's interpretation is that the commenter feels that safety concerns do not justify a preference for alternative B. Such comments go to the decision to be made, in which the decision maker must weigh the relative merits and impacts of all the alternatives and make a selection accordingly. Alternative B effectively separates snowmobile and vehicle traffic on the CDST, and it does not create this circumstance elsewhere – therefore the commenter's point is not evident.
Page 4. Re: Air quality. Air quality has also been investigated at the South Entrance and Flagg Ranch. Additional work has been conducted since the publication of the DEIS, and this information will be incorporated into the final document. Air quality sampling and modeling does discriminate between the effects of wood fires and the pollutants generated by internal combustion engines. Relative to standards: no one wishes to see air pollution become so bad in national parks that it hovers at or just below a health standard. Air quality as compared to NAAQS standards is not the only determinant of air quality. National Parks are charged with management of air resources and air quality related values like visibility and odor. Most visitors, judging by a long string of visitor surveys, expect clear, clean air when they visit national parks.
Page 4. Re: Failure of alternative B to recommend easy ways to mitigate emission problems associated with backed up traffic at the West Entrance. There are ways to mitigate (i.e. lessen) impacts, some of which have been implemented. There is nothing in the DEIS that says new practices to reduce identified problems cannot be adopted at any time. However, there is a systemic or programmatic set of issues to be addressed, and this is the purpose of the EIS and eventual decision. In terms of the pollutants generated by diesel buses, these vehicles are much cleaner than snowmobiles, and autos as well. The FEIS will incorporate additional analysis that quantifies impacts among different vehicle types. EPA supports the approach taken to analysis of air quality impacts in the DEIS. EPA indicates NPS has not gone far enough to deal with the issue in the short term and feels there is a risk in not limiting vehicle numbers or not implementing various measures for up to eight or nine years. EPA also expressed to us that there is no assurance EPA will act to deal with regulatory matters on snowmobile emissions any time soon, and that NPS has the authority under the Clean Air Act to deal with the issue.
Page 5. Re: County Commissioners Revised Alternative E. Revised Alternative E comes from cooperating agencies and the Blue Ribbon Coalition in a variety of forms. The essentials of Revised Alternative E, all versions considered, are not significantly different from alternative E as presented in the DEIS, especially considering the programmatic nature of the proposed action. See the matrix comparison of Revised Alternative E versus the features analyzed in the range of alternatives. All alternatives in the DEIS meet the purpose and need for action to a greater or lesser degree. The support for revised E, or for DEIS alternative features that are consistent with it, does not indicate any need for change in the range of alternatives or the associated analyses. The decision maker will weigh support for or against various alternatives as he or she deems appropriate prior to making a final selection (in the record of decision).

November 27, 1999

Clifford Hawkes
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Denver Service Center
12795 West Alameda Parkway
Lakewood, CO 80228

Mr. Hawkes:

Thank you for the opportunity to comment on the *DEIS* for the Winter Use Plan for Yellowstone and Grand Teton National Parks. We are frequent visitors to Yellowstone NP, where our favorite activity is wildlife watching. As backcountry/cross-country skiers, we have often been discouraged from visiting during the winter season because it is difficult to experience peace and quiet due to the extensive use of snowmobiles. We would like to see the Park Service make a greater effort to protect the natural soundscape during winter. We are also concerned about the effects of winter recreation on wildlife, and would like to see the Park Service do more to protect the Parks' wildlife resources.

Bison Management

The Park Service's management of bison with respect to use of groomed roads has been, and continues to be, completely inadequate. The presence of bison is one of the most unique and valuable aspects of Yellowstone NP. Bison are an important component of the biotic community. When they die, their carcasses are an important nutrient source for a wide variety of carnivores and scavengers. For example, grizzly bears utilize bison carcasses when they emerge from their dens in the spring, and wolves such as the Crystal Creek Pack (Pelican Valley) that winter in relatively deep snow areas may be able to utilize bison during severe winters.

When bison migrate outside of the park, they may be killed as part of a management action and their carcasses are shipped outside of the ecosystem, therefore removing these nutrients from the system. The Winter Use *DEIS* acknowledges that winter road use may have a significant effect on bison population dynamics (*p. 166*):

> "Bison use of winter roads may have changed the energetics of bison ecology by facilitating shifts in the distribution of wintering groups within the YNP population, increasing the overall abundance of bison in the park, and leading to the dispersal of bison into new habitats within and outside YNP (Meagher 1993, Meagher et al. 1994)" (emphasis added)

Unfortunately, the Winter Use DEIS makes no serious effort to address the impacts of groomed roads on bison population dynamics and makes no significant analysis of what impact the various alternatives would have on the bison population. In fact, the Winter

Use DEIS suggests that impacts from winter use on bison migration are being evaluated as part of the multi-agency effort to deal with bison impacts outside the park (*pp 184-185*).

During 1998 the Park Service and other management agencies claimed that bison migration on groomed routes would be more fully addressed during the analysis for the Winter Use Plan. When it was complete, the 1998 DEIS for the Interagency Bison Management Plan for the State of Montana and Yellowstone National Park made no analysis of a "Stop oversnow vehicle travel on all roads in Yellowstone National Park" since this was expected to be covered as part of a wide range of alternatives in the forthcoming Winter Use Plan (*p. 39 of the 1998 Bison DEIS*). In the 1998 Bison DIES, only Alternative 2 proposed to discontinue winter grooming on some road segments as part of an effort to return to the natural (and historic) bison migration situation, however that DEIS did not analyze the effects that reduced grooming would have on bison population dynamics. Instead, the population analysis associated with Alternative 2 made population estimates based on the cumulative effects of all of the components (the combined effect) of that alternative.

In reality, each of the two DEIS efforts has expected that the other DEIS would address this issue more fully, with the outcome that neither DEIS has done an adequate job. Therefore between these two DEIS efforts, there has been no significant effort to analyze the effects on bison population dynamics from closing particular road segments to winter travel. This lack of analysis results in ineffective bison management and could be a NEPA violation for the Winter Use DEIS.

We would like to see the Park Service do a better analysis of this issue, which could be discussed as part of a Supplement to the DEIS. If lack of complete science prohibits further analysis, the Park Service should take a conservative approach and close applicable road segments to winter travel. If additional science shows that some segments do not play a role in augmenting bison migration, then an adaptive management scheme could allow those segments to be opened in the future.

Lynx Management

The DEIS assumes that altering the energetic balance for wildlife in winter is "positive" if the compaction of the travel surface reduces the energy expenditure for the individual:

> "On the positive side, groomed roads provide an energy efficient mechanism for wildlife movement during the winter, when the necessity to conserve energy is related to survival over the season." (p. 184)

This statement was probably made in reference to ungulates, though it is questionable even in that regard. (Would a grizzly bear emerging from its den consider energy efficiency for ungulates during the winter as a "positive" attribute?) The DEIS fails to acknowledge the serious effects that packed snow surfaces (both motorized and non-motorized) have on species adapted to deep snow travel, such as lynx. Lynx have a large foot surface area compared to their body weight (i.e. low foot loading), which allows them to compete effectively in areas of deep snow. Coyotes and bobcats have higher foot loading, so they are more likely to use human travel corridors when hunting and to travel between areas of lesser snow depth. Normally, lynx and coyotes are separated in winter to some extent by elevation, but "this separation may break down where human modifications to the environment increase access by coyotes to deep snow areas." *(Habitat Fragmentation and Interspecific Competition: Implications for Lynx Conservation, Buskirk, Steven W., et al., Chapter 4 of USDA Forest Service General Technical Report RMRS-GTR-30, 1999, p12)*

Coyotes may compete indirectly with lynx by taking their prey, and directly by killing lynx or forcing them to move out of the area.

Chapter 4 of the lynx research report referenced above concludes:

> "Fragmentation of habitats occupied by lynx (including increased openings, higher road densities, exurban residential development, and wider use of snowmobiles and devices that compact snow in areas with deep, soft snow) is plausible mechanism for the questionable conservation status of the lynx in the contiguous United States." (p. 13, emphasis added)

The "Assumptions and Methodologies" section of the DEIS pertaining to lynx (p 168) fails to include the effects of winter recreation related to snow compaction and resultant interspecific competition. Therefore the Park Service needs to do additional analysis to determine how road plowing, road and trail grooming, and backcountry use may effect lynx population stability using the most current scientific information including the report referenced above (USDA RMRS-GTR-30, 1999).

In anticipation of the lynx being listed as a federally Endangered or Threatened species, the Park Service should designate areas of critical importance for the lynx and adopt appropriate management strategies. For example, the area north of Signal Mountain, which contains the majority of recorded lynx sightings, should be closed to all winter use in order to protect lynx.

Wolverine

The Winter Use DEIS fails to address the impact of avalanche control on wolverine. Wolverine are very sensitive to human disturbance. Even a single human incursion into a denning area may cause wolverine to abandon their den site. *(Copeland, J.P., "Biology of the Wolverine in Central Idaho." MS Thesis. Univ. of Idaho, Moscow, ID, 1996)* Of all the species present in the contiguous United States, there is probably no species more dependent on undisturbed wilderness than wolverine *(Buskirk, S., University of Wyoming, personal comm., November 13, 1999)*. Therefore we can expect that a human disturbance of large magnitudes, such as a loud explosion, could disturb wolverine over long distances. We believe that avalanche control activities, particularly the use of explosives at Sylvan Pass, has a significant effect on wolverine reproduction. The East

Entrance should be closed during winter so that avalanche control will not be needed. This closure would also discourage backcountry access to the high mountains in this area, which would offer additional protection for denning wolverine.

Grizzly Bear and Off-road motorized use

We believe the impact of winter recreation on grizzly bears is greater than the DEIS indicates, and that the impact will increase in the future as a result of the presence of wolves. For purposes of determining impact of winter recreation on grizzly bears, the DEIS assumes that "snowmobiles are required to stay on designated roads" (*p. 186*). However, each year numerous snowmobile operators choose to ignore the regulations in order to explore some of the powder away from the groomed roads. In fact, the average number of citations written per winter in Yellowstone for off-road snowmobile use from 1995-1999 was over 50 (23% of 890 snowmobile citations were for off-road travel or for entering closed areas, p. 101). We can assume that a significant number of violations are not discovered or reported, and that a significant number are discovered but the violator is not caught so no citation is ever written.

Therefore, the DEIS analysis for impacts on wildlife, including bears, from snowmobile use should not assume that all snowmobile use is confined to roads.

Another issue regarding grizzly bears that has not been adequately addressed in the DEIS is the increased ~~as~~ use of carrion by bears over the winter. Due to the presence of wolves, and the carrion they provide, grizzly bears are beginning to make significant changes in their winter habits. Already we've seen a few bears delay hibernation, bears emerge during the winter to utilize wolf kills, and other bears emerging earlier in the spring. As bears learn about the presence and certainty of finding wolf killed carrion, they will be seen more and more often during the winter months. Throughout the DEIS there is a tendency to dismiss the problems of bear management during the traditional hibernation period. We believe that the Park Service, in its Winter Use Plan, needs to plan ahead to minimize the human impact to bears that choose to emerge during the winter.

Where there are conflicts between snowmobiling and wildlife, the Park Service should close the roads to snowmobile use in order to protect wildlife. The purpose of the National Park system is to protect our national treasures over the long term. It is not the purpose of the park system to provide economic opportunities to the surrounding communities.

Backcountry Non-motorized Use and forest carnivore conservation

We support the element of Alternatives B, D, and E that would designate "Areas of Designated Trail Use" to protect wintering wildlife. As skiers, we do not want to needlessly stress the Park's ungulate population nor the species dependent on them. Since these trail-use areas would cover an extensive portion of the accessible terrain, we hope that sufficient trails would be kept open so that access to the backcountry, with its better snow cover, would not be cut off.

While we would like to retain access to the backcountry, we certainly do not expect to have access to ALL of it! We would support the adoption of lynx and wolverine conservation zones. Similar to Bear Management Closures, these seasonal closures could be used to protect critical habitat from human *disturbance*. Adoption of these closures might be used to mitigate for some of the problems we've pointed out in regards to lynx and wolverine management.

Summary

Where wildlife protection and human winter recreation collide, we believe humans should yield. There has been too much emphasis on use of motorized recreation in the Parks, especially snowmobilling. The DEIS has not adequately addressed the impacts of Winter Use on bison, lynx, wolverine, and grizzly bears. The time is ripe to carefully consider human impacts on wildlife and on the availability of "quiet" and to adopt policies that will adequately protect the Parks' resources in the face of an ever-growing human population. We hope that you will address the points we've made in a Supplement to the DEIS or in the Final EIS. Please add us to your mailing list for the remainder of the Winter Use Planning process.

Sincerely,

David C. Jones

David C. Jones

Debra Callahan

33608 Valley View Drive
Evergreen, CO 80439

DEBRA CALLAHAN AND DAVID C. JONES
Page 1. Re: Visitor experience. Concern about park values, opportunities and experiences is reflected in the purpose and need for action expressed in the DEIS.
Page 1. Re: Importance of bison carcasses. Bison carcasses' importance to grizzly bears is indicated on pages 116, 121 of the DEIS.
Pages 1-2. Re: Bison EIS/Plan effort. The winter use EIS team did in fact anticipate that information about bison population dynamics would be a significant part of the Bison EIS/Plan effort. The winter use team sought assistance from members of the bison team, and coordination between the two teams has ensued. NPS analysis in the winter use DEIS is sufficient for a programmatic assessment (§1508.18(b)(2)). Nothing in NEPA could be construed to require the park service to close roads in order to study their effect. It is permissible under the CEQ regulations to proceed with an EIS without complete data (§1502.22), under certain circumstances. It is not necessary to have exhaustive site-specific data in order to produce a programmatic plan.
Page 2. Re: Close applicable road segments to winter travel. The conservative approach is put forth in the DEIS alternatives. Adaptive management as applied in alternatives B and E would allow NPS to do as the commenter suggests.
Pages 2-3. Re: Lynx analysis. The DEIS acknowledges the effect of groomed surfaces on lynx, should they be present. On pages 124 and 168, and subsequently for each alternative evaluated in Chapter IV, impacts on lynx are identified as habitat fragmentation from groomed surfaces. The biological assessment to be published with the FEIS incorporates literature cited in this comment (USDA RMRS-GTR-30), and the FEIS analysis will be updated as necessary. NPS reiterates that exhaustive detail is not necessary in an EIS. CEQ regulations encourage the agency to liberally incorporate analysis by reference to reduce the volume and bulk of documents.
Page 3. Re: Lynx management. NPS will follow the recommendations of the Lynx Conservation Assessment and Strategy, and will map habitat accordingly. Lynx surveys are being initiated, and new research is being funded. These measures are indicated as mitigation activities in the biological assessment for winter use. Information derived from these efforts will not be available prior to the decision on winter use, but it will help guide future management.
Page 3. Re: Wolverine analysis. Impacts on wolverine will be reviewed, including those represented by avalanche control.
Page 4. Re. East Entrance should be closed during winter. Alternative D includes the closure of the East Entrance. This feature remains a choice for the final decision.
Page 4. Re: Grizzly bear and off-road motorized use. 10 case incidents are on record. Even if illegal side-running occurs adjacent to groomed trails, which is the usual offense, there are no documented instances of conflicts with bears. The Park Service's assessment remains as stated in the DEIS.
Page 4. Re: Grizzly bear protection. The winter use plan will set broad programmatic direction for winter use. Park biologists do not feel that winter use, as reflected in the DEIS alternatives, represents a significant impact on the species. It should be clear that individual bears will be protected as circumstances arise to create conflict situations. Park superintendents have authority to act assertively by trail closures or other restrictions to protect threatened or endangered species.
Page 4. Re: Closing roads to snowmobile use in order to protect wildlife. There must be a determination that adverse impacts on wildlife are occurring. The extent of the documented adverse impact will drive some form of management action. It is the purpose of this EIS and the decision to be made to arrive at a determination and the action to be taken.
Page 4. Re: Support of elements of alternatives B, D, and E that would designate "areas of designated trail use" to protect watering wildlife. Statements of support are appreciated, however there is no way to respond to such comments except through the decision to be made. The options for backcountry management remain as choices for the decision maker.

Paul R. Kruse
7218 Bomar Drive
Cheyenne, Wyoming 82009
[redacted]

December 1, 1999

Mr. Clifford Hawkes
National Park Service
Denver Service Center
12795 W. Alameda Parkway
Lakewood, CO 80228

Re: *Winter Use Plan and Draft Environmental Impact Statement* for the Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway (DEIS)

Dear Mr. Hawkes:

These comments and the attached analysis are respectfully submitted on behalf of Park and Teton Counties, Wyoming; Gallatin and Park Counties, Montana and Fremont County, Idaho (Cooperating Counties). The Commissioners were duly elected to represent the citizens of the five counties and a landmass of 12.2 million acres that surround Yellowstone and Grand Teton National Parks.

Let me acknowledge our appreciation to the National Park Service (NPS) for naming our five counties and the States of Wyoming, Montana and Idaho as Cooperating Agencies under the National Environmental Policy Act.

This precedent-setting decision has forged a new relationship that will provide long-term benefits to the national parks, the surrounding communities and states. Our efforts can serve as a model for future planning activities on federally-controlled lands across the nation.

The NPS is to be commended on the effort that has gone into developing the Winter Use Plan and Draft Environmental Impact Statement (DEIS) for the Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway. The subsequent hearings on it provided additional opportunities to gather public input. These comments will focus on strengthening the DEIS.

On September 15-16,1999 representatives from the Cooperating Counties and the states of Idaho and Wyoming held a two-day public meeting in Livingston, Montana to discuss the DEIS and formulate a response.

Mr. Clifford Hawkes
December 1, 1999
Page 2

We examined the DEIS's Preferred Alternative B and measured it against the Principles the cooperating counties had previously approved. Based on that criteria, the negative provisions of Alternative B were greatly outweighed by its positive aspects. (Analysis attached)

A central component of the NPS's Preferred Alternative is plowing the road from West Yellowstone to Old Faithful. We would urge that the DEIS discuss the relationship of this provision to the Yellowstone National Park (YNP) Master Plan which has a requirement, "To maintain the quality of a 'winter wilderness,' *park roads will not be snow-plowed in winter* except for the Gardner Northeast Entrance". *Yellowstone National Park - Master Plan*, at 30. (emphasis added)

It is difficult to understand NPS's preference for Alternative B given that it would mandate a tremendous amount of plowing key roads. This seems to be in conflict with the health of the wildlife, since plowing would create berms of snow that disrupt animal movement, including feeding patterns, increase the risk of animal-vehicle accidents, and cause other ill effects. A study conducted in YNP's Madison, Firehole and Gibbon River valleys found that "wildlife movement *across trails was inhibited by traffic and by the berm created by snow created by plowing...*" (emphasis added) See Aune (1981) as described in the DEIS at page 165. We urge a fuller discussion in the DEIS to reconcile the results of these findings and the proposed position.

After evaluating the Preferred Alternative, the Cooperating Counties' representatives then turned to NPS's Alternative E which offered the best match with our Principles. We used Alternative E as a foundation for our position and then supplemented it with the best provisions of the entire DEIS. These were incorporated into the Cooperating Counties' Revised Alternative E that is enclosed.

Sincerely yours,

Paul R. Kruse

Paul R. Kruse

PRK/sk

ALTERNATIVE "B"

FLAWS

- 17 counties are being considered when it should only be the 5 surrounding.
- Only considers the park instead of considering all 5 counties
- Haven't incorporated all data and the influx to other gates.
- Haven't looked at infrastructure in all areas – not feasible due to no parking.
- Aren't enough dollars to implement.
- Plowing the roads damages resources... roads...trees....etc.
- Does not work for the Grand Teton and Continental Divide Trail.
- Safety issues – statistics not broken out.
- Needs to identify areas of research.
- Negligible of economic impact. It's keeps diluting by adding counties from 5 to 17.
- Dispute that it is a benefit to low income individuals. How do they get here anyway? They don't come in the summer, why would they in the winter?
- Doesn't address adjacent lands and communities.
- Need to address subsidies for mass transit. Is there a need?
- More homework needs to be done.

POSITIVES

- Looks at the positive effects and not only the negative on the communities.
- Need to have park (trails) closed for specific time frame 10pm - 6am.
- Implement information and enforcement.
- Good to have an advisory committee — need to specify membership.
- Look at carrying capacities - winter visitors. Staggered times or reservations.

COOPERATING COUNTIES' ENVIRONMENTAL IMPACT STATEMENT REVISED ALTERNATIVE "E"

Criteria Used

I. Socio-Economic Impacts
II. Park Infrastructure
III. Diversity of Visitor Experience
IV. Impact on the Resources
    A. Air
    B. Sound
    C. Water
    D. Wildlife
    E. Thermal Features
    F. Trees

Principles

The Cooperative Counties are guided by the following principles in formulating their position on the Environmental Impact Statement (EIS) for the Grand Teton and Yellowstone National Parks:

1. Employ adaptive management so the plan evolves to accommodate new scientific information, legislative or regulatory mandates and changing resource conditions throughout the EIS' projected 10-year lifespan;

2. Utilize cooperative decision-making to provide opportunities for elected national, state, county and local governmental officials, as well as advocacy groups, to present their viewpoints. Encourage the National Park Service to build on and expand the relationships it has developed with the Cooperating Agencies. Using this approach will strengthen public understanding, and ultimately acceptance, of management decisions for the Parks;

3. Support sound, scientific research. Existing research, including economic projections, is inadequate and, in some instances, completely lacking on key winter use issues. Therefore, the Counties support funding to fill these crucial gaps;

4. Independent review of scientific research methods and urge NPS to coordinate it's research with independent research firms and/or regional academic institutions;

5. Support the maximum recreational opportunities that are compatible with this natural resource. A full range of appropriate winter recreational activities should be offered that reflects the individual use-numbers of each;

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PAGE

6. Utilize national EPA standards for the range of air constituents, including carbon monoxide, hydrocarbons (polycyclic aromatic hydrocarbons, methyltertbutyl ether and nitrous oxides) and particulates;

7. Address national standards for excessive sound limits;

8. Accurate monitoring and strict enforcement of speed, air and sound limits;

9. Strict adherence to applicable water and solid waste quality standards.

The Cooperating Agencies' Revised Alternative "E" emphasizes the protection of wildlife and other natural resources, while permitting park visitors access to a range of winter recreational experiences. It uses an adaptive planning approach that allows the results of new and on-going research and monitoring to be incorporated, but with independent third party review by the National Academy of Sciences.

Using criteria stated within Executive Order 11644 (as amended) and its implementation regulations (36 CFR 2.18), monitoring results demonstrating disturbance to wildlife or damage to park resources would be cause to implement actions for mitigating these conditions (e.g. closure to snowmobile use). The Cooperating Agencies' Revised Alternative "E" calls for the institution of an advisory committee to make recommendations about standards for addressing a range of issues. Local, county, state and federal agencies would participate in this committee, as well as representatives from the snowmobile industry and environmental groups.

Actions Common To All Three Parks

This alternative would be a commitment to the development of acceptable measures for mitigating impacts, consistent with criteria in 36 CFR 2.18.

- Encourage partnerships and public participation by establishing an advisory committee (established by the Secretary of the Interior under the Federal Advisory Committee Act.) The Committee would recommend implementation of EPA emission standards as they are developed and assist with the development of new sound standards for all oversnow vehicles for the Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway.

  The committee would also advise the National Park Service on scientific data regarding the long-term visitor carrying capacity of the parks, air and water quality issues, as well as the phasing and implementation of these standards by the National Park Service.

The committee would include representatives from: cooperating agencies for this Winter Use Plan/EIS; the National Park Service; and other federal, state government agencies; and from environmental groups and snowmachine interests.

The Committee shall utilize the technical expertise of *all* relevant sources including, but not limited to, the U. S. Environmental Protection Agency; the U. S. Fish and Wildlife Service; state departments of environmental quality, game and fish and other natural resource agencies.

- Establish a nighttime closure into the Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway from 10 PM to 6 AM to promote public safety, improve trail maintenance and protect wildlife.
- Require the sale of only Bio-Base fuels (10% ethanol-blend fuel and synthetic low-emission oil) within the Parks beginning with the 2001-02 winter season. All commercial snowmobile operators in West Yellowstone, Montana, Jackson, Wyoming and at the other entrances would also be required to use Bio-Base fuels for all snowmobiles they send into the Parks.
- Support strict enforcement of the posted speed limit or a maximum speed limit of 45 mph.
- Establish an interim visitor carrying capacity, based on use patterns related to the past 7-year average, to address overcrowding concerns and trail maintenance issues.
- In order to better utilize existing facilities, reduce impacts on the park's environmental resources, and assure a quality visitor experience, visitor services should be dispersed throughout the park (e.g., Canyon, Grants Village, etc.)

Actions for Yellowstone National Park

- Provide expanded non-motorized opportunities/trails away from main motorized routes by providing regular skier shuttles from Old Faithful and West Yellowstone to non-motorized areas away from these developed sites.
- Continue automobile access to northern attractions in the Tower, Roosevelt and Mammoth areas. This alternative would prohibit plowed access anywhere else in Yellowstone National Park during the winter.
- Continue scientific studies and monitoring related to park resources and winter visitor use, to be subsequently reviewed by an independent, third party. If these scientific studies and subsequent reviews substantiate that human presence or activities have a detrimental effect on park resources that could not otherwise be mitigated, the closure of selected areas of the park to

visitor use (including sections of roads) could result. Any closure would require a minimum of one year's notice.

- Restrict non-motorized uses in wildlife winter range to travel on designated trails only (zones 8 & 9).
- Address congestion and visual concerns regarding snowmobile parking at Old Faithful by relocating it away from the Visitor Center area. Reserved parking in the Visitor Center area for snowcoaches only. All parking will comply with the Americans with Disabilities Act.
- Require all West Gate entrance passes to be pre-purchased at local outlets or at the Public Lands Information Center in West Yellowstone. Also promote the sale of these pre-paid passes at all park entrances.
- Restrict the length of the winter use season to the period from mid-December to mid-March.

Actions for Grand Teton and the Parkway

- Provide additional non-motorized opportunities/trails away from main motorized routes by expanding non-motorized access within the interior of Grand Teton National Park.
- Support preservation of a route for the Continental Divide Snowmobile Trail on a newly established year-round off-road path from the East entrance of Grand Teton National Park to Flagg Ranch.
- Support continued motorized use on Jackson Lake (snowmobile and snowplane).

COOPERATING COUNTIES' COMMENTS

YELLOWSTONE and GRAND TETON NATIONAL PARKS and the JOHN D. ROCKEFELLER, JR., MEMORIAL PARKWAY WINTER USE PLAN/DRAFT ENVIRONMENTAL IMPACT STATEMENT

The Cooperating Counties acknowledge the many strengths of the DEIS. The bulk of our collective comments are recommendations on strengthening the document, so it provides an adequate foundation for the NPS' decisions.

Process

The CEQ regulations specify that the National Environmental Policy Act's (NEPA) purpose is not to generate paperwork, but to foster excellent action.
40 CFR Part 1500.1(c). In order to achieve that purpose, the NEPA document must begin with a clear definition of the problem to be solved by the pending action and the objectives that constrain the array of potentially acceptable solutions.

This Yellowstone and Grand Teton National Parks Draft Environmental Impact Statement (DEIS) attempts to define the problem with a general overview of the difference between existing and desired conditions.

Absent a clear framework for analysis of alternatives, it is difficult for the reader to determine what, if any, conditions the National Park Service is trying to address and why a particular alternative is specifically responsive to each issue.

Socio-Economic Effects

The DEIS discusses the basis for socio-economic considerations in the NEPA process by focusing only on the regulations. According to it, "Although there are no specific regulations requiring protection of social values, impacts on them are considered an important piece of the federal planning process".
DEIS at 159.

The document also should include appropriate references to the Act itself. One example of where the NEPA mandates socio-economic considerations as part of the environmental analysis is found in the Act whereby Congress:

> declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments...

> to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic and other requirements of present and future generations of Americans.

Pub. L. No. 91-190; 42 U.S.C. 4321 Section 101(a) This relationship was memorialized in the individual memoranda of agreement signed by each county.

> The general responsibilities of each cooperating agency include: (b) Providing technical assistance and advice in those areas for which the cooperating agency has identified expertise applicable to the winter visitor use plan....Park County's special expertise is in the area of winter use socioeconomic effects.

Park County, Wyoming Memorandum of Agreement, November 17, 1998.
Note: A similar provision appeared in each of the MOA's although the "special expertise" language differed somewhat.

A full identification and discussion of existing socio-economic authorities is lacking from the DEIS. For instance, it refers to "the U. S. Water Resources Council's *Principles and Standards for Planning Water and Related Land Resources* (U. S. Department of Interior [sic], Water Resources Council 1984)". However, according to U. S. Department of the Interior officials, there is no such document.

Is the reference meant to be for *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies*, February 3, 1983? If it is, a discussion of the interplay between this document and the DEIS is necessary to fully understand how the *Principles and Guidelines* document provide for an assessment of the economic effects in the proposed action.

The DEIS socio-economics section has a gap in the information it attempted to gather. The bulk of the DEIS's Assumptions and Methods section rests on studies that are not yet finalized. Moreover, no target date for their completion is indicated.

For example, "The results of the 1999 YNP and GTNP winter visitor survey were used as a basis for much of the following analysis of impacts associated with the winter use alternatives". DEIS at 160. That study, Winter 1998-99 Visitor Survey Yellowstone N. P., Grand Teton N. P. and the Greater Yellowstone Area: Analysis and Results, could provide the most recent data on a number of key issues, but the Cooperating Agencies will be deprived of commenting on it in its final form.

In an October 8, 1999 letter to the Cooperating Counties, EIS Team member John Sacklin sets a December 10, 1999 deadline for comments on it – ten days after comments are due on the DEIS.

Thus, the first opportunity we will have to see how NPS treats the socio-economic information contained in this key study will be in the final EIS. At that juncture, any input we might have will be moot.

We are disappointed our Counties were not allowed to provide specific socioeconomic analysis on each alternative, which is what we anticipated at the start of the process. NPS's six month delay in providing the finalized DEIS precluded this and eroded the effectiveness of the Counties' participation in the process.

Moreover, the authors of the DEIS failed to utilize the information that is available. The Cooperating Counties provided NPS with analysis on the general economic effects for each individual county. The DEIS makes only a brief reference to one of these studies (Gallatin County, Montana) before casually dismissing the information as only "potentially relevant". DEIS at 160.

We have attached economic profiles, prepared by the Wyoming Business Council, for Park and Teton Counties and the State of Wyoming that provide information on additional socioeconomic components. They are categorized by Total Retail Expenditures and then broken down by sectors into Food Services, Apparel & Services, Pharmaceutical/Drugs, Leisure/Entertainment, Transportation, and Home Furnishings. In addition, each provides income levels, population/gender/race/education, marital status breakouts, occupation and occupation-by-industry statistical information.

The same data is provided for Wyoming's Fremont, Sheridan, and Lincoln Counties, as well. They were included in the 17-County Analysis Area the DEIS uses, but earlier NPS denied those counties' requests to formally be named "Cooperating Agencies". (see later discussion) The Wyoming Business Council's studies' figures are in sharp contrast with those offered by NPS. They provide powerful evidence that the potential economic effects are far greater than those calculated by NPS.

Even if we agreed with the $13,750,000 loss NPS presents in the DEIS and it is generally accurate, we strongly disagree that it will only have a "minor impact" on the economy. See Gallatin County's and other studies.

NPS clouds the issue by citing a $12.7 billion total economic output of the Greater Yellowstone Area instead of looking first at the impact it will have on the five counties surrounding the parks where the bulk of the direct effects will occur.

Any loss will not be apportioned evenly among all the 17 counties cited in the DEIS. Nor is there scientific data offered to support NPS's assertion that it will. The DEIS simply states, "The 17-county analysis area represents the counties and communities where most of the economic activity related to the parks occurs". However, the very next paragraph agrees with the counties,

> "These analysis areas are not economically homogeneous, and any impacts associated with alternative management actions would not be distributed evenly across the analysis areas. Rather the counties and communities closest to the parks would be much more heavily impacted than would more distant, larger and more economically diverse communities within the GYA." *DEIS* at 160-161

For example, Gallatin County would suffer the brunt of the losses under the Preferred Alternative. Many of these 330 jobs would be from the total number of people employed in West Yellowstone, Montana, which has a workforce of 3,065 individuals who generate a payroll of $15.741 million. If these changes occur, they will be devastating for West Yellowstone or may have unintended consequences for other gateway communities.

Surrounding Community/Park Interrelationship

The description of the existing condition includes the statement; "Economic development interests in communities expect support from land management agencies, since many business ventures are dependent in some way on the use of national parks and forests."

This theme was paraphrased and repeated by representatives of several groups, who testified during NPS's hearings on the DEIS, that "parks do not owe anyone a living". This statement is correct. However, it fails to acknowledge the degree to which there is a necessary interrelation between the Parks and surrounding towns and counties.

The DEIS should articulate the levels of winter use and growth in the businesses that provide support services, especially in the gateway communities, which have occurred in response to federal policies that authorized and, even encouraged, winter use in the parks. The relationship is mutually beneficial and has been carefully fostered by both sides for decades.

It has been recognized by the NPS in its own documents. The *Yellowstone National Park Master Plan* (page 17) states that, "Fulfillment of Yellowstone National Park as a unique natural environment is directly related to the proper development of its peripheral gateway towns as primary visitor hubs, and to the management of the surrounding national forests as multi-use forests."

The Master Plan goes on to define the benefits that the relationship provides to Yellowstone N. P. "Ultimately freed from having to provide the mass terminal creature-comfort facilities and services within its prime resource zone, Yellowstone National Park can begin to expand its interpretive, educational, and environmental functions. *Id.*

Another document offers a similar view. "Yellowstone National Park plays a prominent role in the social and economic life of the Greater Yellowstone Area". It continues, "The gateway communities provide food, lodging, gasoline, and other automotive supplies and services as well as souvenirs and other goods and services to the motoring public". *Yellowstone National Park Environmental Assessment - Temporary Closure of a Winter Road*, (November, 1997) at 24.

Another example of this necessary interrelationship is lodging. According to NPS figures, 27,000 recreational visitors-per-day entered Yellowstone N.P. during July, 1995. Only about half of them, 14,000, could stay overnight at the 210 lodging units, at the 2213 campgrounds or at the 289 backcounty campsites. The remaining Yellowstone visitors – 3,000-a-day or 403,000-a-month – stayed in the gateway communities. And this gap is widening with the closure of various facilities. See YNP Master Plan.

The need is intensified during the winter months when fewer park facilities are open because of the decrease in staffing levels. Both visitors and Park employees rely on the gateway communities for lodging, since "most administrative support facilities in the parks (ranger stations, maintenance areas, employee housing and related structures) were developed for summer use and are inadequate for winter use". Environmental Assessment at 25.

In turn, the Counties and gateway towns depend on the economic viability of their businesses to provide a solid tax base to ensure funding for hospitals, schools, libraries, fire, law enforcement, ambulance and other traditional services which also support park visitors.

Each county has submitted detailed analysis of specific economic effects. A common theme throughout these studies is the importance of the winter season to the overall viability of our businesses, and we urge NPS to appropriately incorporate this information into the EIS.

Accurate Monitoring and Strict Enforcement of Water Standards

The DEIS discusses the threat of degradation of streams as a result of snowmachine emissions. If this is truly a concern, then it is difficult to understand why Yellowstone officials have cut back on efforts to measure and evaluate the Park's streams. Its own Strategic Plan lays out the direction for this key issue, "Yellowstone no longer contributes funds to stream gauge monitoring programs due to funding shortages". **

The Plan further states that, "Ground water monitoring has been abandoned." Id** We recommend an explanation that reconciles these actions since they seem to be at odds with the concerns referenced in the DEIS.

In addition, the DEIS' focus on *de minims* water pollution levels, allegedly exacerbated by snowmachines, ignores the larger picture or the cause -- the antiquated systems that regularly dump large amounts of raw sewage into Yellowstone Lake and other pristine waters.

YNP Superintendent Mike Finley has detailed these in his December 3, 1998 letter to the Wyoming Department of Environmental Quality. (attached) In it, Mr. Finley states that:

> Much of the water and sewage collection and distribution systems are leaking and the treatment facilities are in various state of deterioration ... One system has totally failed and resource damage is occurring in at least three others. The smaller septic tank systems are not being maintained properly and will eventually fail.

But park officials have ignored offers of help. The Park County, Wyoming Commissioners wrote Mr. Finley reiterating their mutual goal of clean water and responsible waste disposal. Because of concerns that NPS officials were quoted in press accounts that facility closures may be necessary to prevent future sewage spills, the commissioners offered to meet with NPS officials in an effort to develop solutions that help resolve the Park's sewage problems. To date, Yellowstone officials have not responded to that January 12, 1999 letter. (copy attached).

Adaptive Management

Adaptive management should be employed so the plan evolves to accommodate new scientific information, legislative/regulatory mandates and changing resource conditions throughout the EIS' projected 10-year lifespan.

We agree with NPS in the Strategic Plan's assessment: "Overall, we believe the state of natural and cultural resources in the park to be good". *Yellowstone National Park Strategic Plan*, September 30, 1997.**

However, there are numerous gaps of specific information for the two parks. Many of these are acknowledged in the DEIS. Adaptive management is appropriate for those situations in which the responsible agency lacks important data pertinent to management of the natural resource system. This allows the results of new and ongoing research and monitoring to be incorporated as it becomes available.

If NPS implements an adaptive approach, the DEIS should disclose the nature of new and ongoing research; monitoring methods; the standards to determine whether disturbance to wildlife or damage to park resources is occurring; and the additional NEPA analysis required to support implementation of contingency strategies.

Any monitoring results that demonstrate disturbances to wildlife or damage to park resources would be cause to implement actions for mitigating these conditions. NPS can then develop appropriate management options for these issues and an individual strategy to deal with them in the least restrictive manner.

Utilizing an Adaptive Management approach and incorporating the Cooperating Agencies into the decision-making process will provide for more reasoned evaluation of the options and strengthen the public's confidence in the process.

Cooperative Management

Cooperative decision-making is critical to the process. It provides opportunities for elected national, state, county and local governmental officials, as well as advocacy groups, to present their viewpoints. The Cooperating Counties encourage the National Park Service to build on and expand the relationships it has developed with the Cooperating Agencies. Using this approach will enhance public understanding, and ultimately acceptance, of management decisions for the Parks.

The seeds of this approach are found in YNP's Master Plan. It recommends expanding the scope of the Joint National Park Service and Forest Service Coordination Committee to better fulfill the legal mandate of the Park. It states:

> "However, a broader system of cooperative planning should be developed to coordinate regional problems. Ultimately, if Yellowstone National Park is to provide for the enjoyment of this and future generations – with acceptable resource perpetuation – cooperative planning that incorporates the national parks, national forests, other public lands, and gateway communities is essential. This *cooperation is necessary* to optimize the region's collective capacity to serve the requirements of the public, many of which can and should be accommodated outside the core parks. (emphasis added) *Yellowstone National Park Master Plan* at 14.

This relationship should be used for a full range of issues confronting the two parks and is not limited to only working "closely with federal, state and local land management agencies *on issues which we agree*..." (emphasis added) as the *Strategic Plan*** states.

The Plan also chronicles the decreases in natural resource budgets and the attendant 40% decline in the park's number of permanent positions. This is coupled with research cutbacks, "For example, in the past three years, the park has systematically dropped most of its resource monitoring programs due to funding shortages". *Id.***

Among its benefits, cooperative management will allow for identification of assets so they can be utilized in the most efficient and cost effective manner. See Water Standards discussion.

Sound Scientific Research

The Cooperating Counties support sound, scientific research. Existing research, including economic projections, is inadequate and, in some instances, completely lacking on key winter use issues. Therefore, the Counties support funding in order to fill these crucial gaps.

The Counties also urge the continuation of scientific studies and monitoring related to park resources and winter visitor use and that it be subsequently reviewed by an independent, third party. If these scientific studies and subsequent reviews substantiate that human presence or activities have a detrimental effect on park resources that could not otherwise be mitigated, the closure of selected areas of the park to visitor use (including sections of roads) could result. Any closure would require a minimum of one year's notice.

The lack of scientific information on key issues is well documented. In many instances, there is inadequate scientific data to evaluate conditions and explore potential options to determine what is best for the resources. An example of this is in the DEIS's Air Quality Monitoring section which includes the sentence, "Few conclusive studies exist to help develop informed decisions to reduce the health and environment concerns caused by winter transportation".

A similar view is offered in the *Yellowstone National Park Environmental Assessment - Temporary Closure of a Winter Road* (November, 1997), which states, "At this time, insufficient information exists to justify large-scale closures of the park to winter activities". Id at 10.

An example of this is set out as one of YNP's long-term goals – development of the nine remaining data sets identified in basic natural resource inventories – slated to be achieved by 2002. Yellowstone National Park Strategic Plan, September 30, 1997**. This needs to be a priority for the Park and we support the goal, since it will be crucial to establishing the Park's overall carrying capacity.

Independent Outside Research

The Cooperating Counties recommend that NPS utilize an independent review of scientific research methods and coordinate its research with independent research firms and/or regional academic institutions.

Yellowstone has as one of its own goals to increase by 50% formal agreements for the study and protection of Yellowstone's natural and cultural assets. Id.**

An example of the need for independent review was demonstrated by events surrounding Yellowstone N. P.'s handling of the *Air Quality Concerns Related to Snowmobile Usage* study. Three weeks after NPS's Air Quality Division completed it, Yellowstone National Park announced the study in an October 19, 1999 press release which was misleading in their interpretation of data.

Key YNP officials then engaged in a campaign that resulted in national and international coverage. The attention-getting parts of the press release later proved false and forced a series of individual interviews and press stories. Unfortunately, that bell cannot be unrung, and the corrections have not received the same attention the initial press release did.

Carrying Capacity

The Cooperating Counties recommend the establishment of an interim visitor carrying capacity, based on use patterns related to the past seven year average, to address overcrowding concerns and trail maintenance issues.

This will have to be reconciled with the YNP's Strategic Plan that has as its long-term goal to "Increase by 10% over the 1997 levels, the amount of receipts from park entrance, recreation and other fees".

Wildlife carrying capacity is identified as an Issue or Concern Not Addressed in the DEIS because it "is a complex effort outside the scope of this study and the decision to be made". DEIS at 16. However, we would argue carrying capacity is not a management objective. It is a characteristic of the wildlife habitats in the Parks. Accurate knowledge about carrying capacity is necessary to understand the consequence of management actions on Park wildlife and therefore should be part of the DEIS.

Once the carrying capacity is established, the Cooperating Counties support the maximum recreational opportunities that are compatible with this natural resource. A full range of appropriate winter recreational activities should be offered that reflects the individual use-numbers of each.

Dispersal of Activities

In order to better utilize existing facilities, reduce impacts on the parks' environmental resources, and to assure a quality visitor experience, the Cooperating Counties recommend that visitor services be dispersed throughout the park (e.g., Canyon, Grants Village, etc.).

We advocate expanding non-motorized opportunities/trails away from main motorized routes by providing regular skier shuttles from Old Faithful and West Yellowstone to non-motorized areas away from these developed sites.

Automobile access to northern attractions in the Tower, Roosevelt and Mammoth areas should be continued. Our alternative would prohibit plowed access anywhere else in Yellowstone National Park during the winter.

In 1996-7 there were 114,000 winter visitors – 61% snowmobilers, 9% snowcoach riders and 30% automobile passengers. Only 500 of those visitors skied into the park or about 0.004%. Yellowstone National Park Environmental Assessment, Temporary Closure of a Winter Road (November 1997) at 19.

While these figures have changed somewhat we would urge they be reconciled with any results from the 1998-99 Winter Survey results and considered as a proportional basis for determining use.

Restrict Non-Motorized Uses in Wildlife Winter Range to Travel on Designated Trails Only (zones 8 & 9).

Several studies cited in the DEIS found that "although activity on roads does displace wildlife, they appear to be disturbed less by vehicles on roads than by people on foot or skis. This is because of the predictability of vehicles on roads (Cole 1978, Schultz and Bailey 1978, Walther 1979, Aune 1981, Cassier 1988)". DEIS at 165.

The DEIS expands further on this point "Because elk can habituate to predictable human activity, backcountry skiing may affect elk behavior more than snowmobiling on established roads and trails. Human activities in unexpected places or times will elicit more flight response that predictable oversnow travel (Aune 1981; Cassier et al 1992) DEIS at 167. The Cooperating Counties urge this information be considered as it looks at use in the final EIS.

Legal Parameters

In the Ideas Considered But Not Included section there is no discussion of relevant regulations or what effects they have on the options. The DEIS also lists a series of statutes and merely asserts that somehow they have relevance to the process. I recommend NPS cite the applicable portions of these laws and provide analysis of what effect they have on each alternative.

Contingent Valuation

The *Draft Report - Winter 1998-99 Visitor Survey, Yellowstone N. P., Grand Teton N. P. and the Greater Yellowstone Area: Analysis and Results* utilizes Contingent Valuation Methodology as a pillar of the study. This approach asks respondents to place a monetary value on a variety of resources. The Report may be useful, as part of an analysis, but it should not be viewed as dispositive.

This approach has proven to be controversial for a number of reasons, chief among them being the speculative nature of the response. The Report makes no mention of this failing, choosing instead to only discuss its positive aspects.

In an attempt to bolster credibility, the Report cites guidelines in a completely different field – Superfund damage cases. It then references three studies, all of which were conducted by the authors of the Winter Use Survey. An additional reference to a 16-year-old U. S. Water Council study is inadequately cited to provide guidance. The EIS should present a discussion of all aspects of this controversy instead of a single side of it.

Specificity

The DEIS lacks crucial analysis to support its broad assertions on key points. One example is in its discussion of controlling authorities. The DEIS states, "Because the area suggested for development in management action 1 has been recommended for wilderness designation, implementation of that would constitute a violation of several statutes and policies that govern the NPS".

Yet, the DEIS fails to state and analyze any of those statutes. This approach leaves many questions regarding the foundation for central components of the document. If there is statutory authority to manage the parks as "wilderness" it should be provided. If there is no controlling statute, then a measurable standard should be stated. If there is no statutory authority to apply wilderness standards, then other policies and regulations, including the definition of wilderness, do not apply.

Omissions and Research Gaps

1. One glaring omission from the DEIS' Appendix I is the text of *Economic Importance of the Winter Season to Park County, Wyoming* by Dr. David T. Taylor. This May, 1999 study from the University of Wyoming/United States Department of Agriculture provides the socio-economic information and analysis for one of the five Cooperating Counties – Park County, Wyoming.

2. CEQ Regulations require certain topics to be addressed in every EIS. One of these is possible conflict between proposed actions and land use plans, policies or controls for the area concerned. The EIS uses the Greater Yellowstone Area as its analysis area in many instances. This area is comprised of 24% private lands and 5% state lands, yet the analysis of potential conflicts is lacking.

3. The DEIS lists the major responsibilities of the Agencies to NPS, but not the reciprocal duties of the Lead Agency to the Cooperating Agencies. Because of the precedential nature of our participation in the process, we recommend a similar section be included that discusses these. As it is, the reader does not fully understand this relationship until 300+ pages later where the Memoranda of Agreement appear in the Appendix of Volume II**.

4. "The lack of information about any impacts to subnivean mammals from winter use makes it difficult to draw any conclusions ... Until more research is completed in this area, the only management guideline is to encourage more research on the subject especially in areas where widespread and high intensity snowmobiling or skiing occurs near comparison control areas". Olliff, Tom, *The Effects of Winter Recreation On Wildlife: A Literature Review and Assessment*, Draft Greater Yellowstone Winter Wildlife Working Group, at 74 (1998).

5. No KNOWN effects to thermal areas are resulting from current winter use. Environmental Assessment at 40.

6. Information is not available "from potential visitors who may not currently come to the parks". DEIS at 176.

7. While impacts to aquatic species from snowmobile exhaust deposition have not been well studied, (Ruzycki and Lutch In Press), research on effects of 2-stroke engines has demonstrated that hydrocarbon pollution in water will initially persist on the surface and eventually settle in the water column, exposing fish and invertebrate populations". DEIS at 163.

8. In the final EIS, modeling *may* be used to assess the effects each alternative may have on air quality. DEIS at 165

9. The DEIS mentions some studies that are "underway", but fails to acknowledge the one study, undertaken by NPS's own Air Resources Division, that has drawn the most attention. NPS controlled the timing and manner of its release.

   It was first announced in a Press Release (attached) and not shared with NPS's formal partners in the process. This "Policy Press Release" was exacerbated by the media campaign undertaken by key Yellowstone N. P. officials. See earlier discussion.

Analysis

The requirements for cultural resource management should be articulated and analyzed. The DEIS simply states, "The National Park Service is mandated to preserve and protect its cultural resources through the Organic Act of 1916 (USC title 16) and such specific legislation as:" and then lists 14 statutes and policies that apply. The analysis should articulate the relevance of each and how the alternatives would be affected by these considerations.

** Many reference documents, including the DEIS Volume II and Strategic Plan, do not have numbered pages. Therefore, precise citations are not possible.

Cover letter. Re: DEIS' Focus on pollution levels. The EIS must evaluate and disclose the effects of the alternatives for winter recreation use on water quality. The larger picture is in fact disclosed in the DEIS in the cumulative impacts analysis (page 321), which mentions other sources of impact including sewage effluents. The DEIS states that snowmobile emissions would appear to only add a very small increment of pollution to other more significant water quality impacts. Disclosure of the direct and indirect effects of winter use, and their additive effect on cumulative sources of impact is done in accordance with CEQ regulations (§1508.7 and §1508.8). The issue of water and sewage facilities is being handled in a different forum, and any analysis specific to this issue is beyond the scope of the winter use EIS.

Cover letter. Re: If NPS implements an adaptive approach. Processes associated with adaptive management will be provided in the FEIS: definitions, administrative actions, study methods, management actions, and NEPA requirements.

Cover letter. Re: Preference for alternative B. NEPA (CEQ Regulations) does not stipulate the rationale for selecting a preferred alternative in an EIS. It stipulates that in a final EIS, a preferred alternative must be identified. The statement of preference for one or more alternatives in a draft EIS is discretionary, depending upon whether the agency has a preference at that point (§1502.14(e)). The identification of a preferred alternative in a DEIS should be regarded by the public as extremely tenuous. This is because an EIS is to serve as a means of assessing impacts of proposed agency actions "rather than justifying decisions already made" (§1502.2(g)). The FEIS preferred alternative may be viewed more as a "precursor" decision, which will only become final in a Record of Decision that expresses the rationale for the choice. In any case, it is clear that merely the expression of a preferred alternative, by itself, can in no way invalidate the entire EIS analysis. The decision maker can select any of the alternatives in a Final EIS through consideration of a variety of factors, including but not limited to environmental impacts.

Cover letter. Re: Cooperating Counties Revised Alternative E. NPS feels that the Revised Alternative E is not significantly different from alternative E analyzed in the DEIS, in terms of any environmental effects that might be disclosed for each. Cooperating agencies' preference goes more to the decision to be made than to substantive reasons for changing the range of alternatives or the analysis. The decision maker is responsible for considering the opinions and preferences of the cooperating agencies.

Re: Attachment to cover letter listing the "flaws and positives" of alternative B. This listing is a mix of features that occur in one or more alternatives (to which the commenter is both pro and con), and perceived weaknesses in the analysis that applies to more than just alternative B. Also, the bulleted statements are not clearly stated to the degree that NPS can respond effectively.

Re: Attachment to cover letter spelling out cooperating counties' Revised Alternative E. Revised Alternative E comes from cooperating agencies and the Blue Ribbon Coalition in a variety of forms. The essentials of Revised Alternative E, all versions considered, are not significantly different from alternative E as presented in the DEIS, especially considering the programmatic nature of the proposed action (§1508.18(b)(2)). Some features of Revised Alternative E are present elsewhere in the range of alternatives considered. See the matrix comparison of Revised Alternative E versus the features analyzed in the range of alternatives.

NPS takes this opportunity to further address the complexity of alternative formulation in this effort. Many suggestions for alternatives or alternative features were made in the thousands of comments received. A great deal of criticism was leveled at the current range of alternatives because people did not like the way features were "mixed." At the same time, many people focused on features of alternatives that they liked, and features to which they were opposed. It is clear that for such complex issues there could be an infinite number of possible alternatives. CEQ states that in such instances, the agency need only consider a reasonable number of examples that cover the full spectrum of possible alternatives that meet the purpose and need (Question 1b, CEQ 40 Most-Asked Questions). What constitutes a reasonable range depends on the nature of the proposal and the facts in each case, where the proposal is at the discretion of the agency.

The final selected alternative that is to be documented in a record of decision may mix features from the range of alternatives evaluated in the final EIS. Such mixing can occur as long as the mixed features are consistent with one another, and as long as the features and their effects would not fall outside the range of alternatives disclosed in the EIS (§1505.1(e)). A finding as to that circumstance would be entirely appropriate in the record of decision, along with the rationale, should the selected alternative not precisely correspond with one of the "mixes" evaluated in detail. This material is explained in a new FEIS section on the decision to be made.
Page 1. Re: Difference between existing and desired condition. It is the nature of the decision that may not be well understood. It has been NPS' intent from the beginning of the process to prepare a programmatic plan (§1508.18(b)(2) and (3)). This would be the purpose of preparing a "comprehensive EIS." There should have been no illusions that a plan of this magnitude would be based upon detailed, site-specific data in order to make every decision possible relating to winter use. This programmatic approach is acceptable under the law, in the way that NEPA is the vehicle for producing NPS General Management Plans and USFS Forest Plans, and amendments thereto. An expression of general goals and objectives (purpose), and a general description of existing conditions (need) is entirely appropriate for this level of analysis. Though the alternatives are designed to respond in different ways to the purpose and need for action, NPS will improve the linkage between alternative concepts and objectives.
Page 1. Re: Socioeconomic Effects. There are several reference in the CEQ regulations applying to socio-economic analysis. There are several major reasons for this. First, the scoping process as conducted under §1501.7 inevitably raises the social and economic effects of a proposed action. In many instances, these are regarded as significant issues. Second, the impacts must be considered in the context of society as a whole, the affected region, the affected interests, and the locality (§1508.27(a)). Third, the intensity of impacts on the quality of the human environment must be gauged (§1508.27(b)), where "human environment" is to be viewed comprehensively (§1508.14). Effects (direct, indirect and cumulative) are defined as including both economic and social impacts (§1508.8). However, there is nothing in the regulations that stipulates the weight which must be put on these effects in the decision process.
Pages 2-4. Full identification and discussion of existing socio-economic authorities, etc. Thank you for correcting this citation, which should read (p. 159 DEIS): "Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (U.S. Department of Interior, 1983). This reference has previously been used by the DEIS authors to guide benefit-cost type of analysis. The citation is not necessary in the context of the current document and will be deleted. Most of the analysis relies on the winter survey report, which has been peer reviewed and was finalized in early May 2000.
Page 4. Pages 83-93 Re: affected social and economic environments. The NPS is not aware of definitive information about the degree to which winter industry growth has occurred in response to federal policy However, the NPS does not feel this would be an especially relevant disclosure. Growth in winter use industries and increased use was not entirely at the behest of the federal government. Communities willingly engaged in these activities, and marketed them accordingly while NPS found supportive policies. The relevant frame of reference is, as indicated in the purpose and need for action, to determine the level of use that may occur without adversely affecting park resources.
Page 5. Re: Commenter on page 3 indicates that counties were not allowed to provide specific socio-economic analysis on each alternative, but that they provided general economic effects for each county which NPS "failed to utilize." On page 5, commenter states that the counties each submitted detailed analysis of specific economic effects, and that the counties urge NPS to incorporate this information into the EIS. NPS did not fail to use information provided by the cooperating counties. Information provided by the counties was made available to the Park Service's economics consultant. According to the CEQ regulations, §1503.3(b), commenting agencies that criticize an analysis methodology should describe an alternative methodology and why it prefers it. The commenter, in this instance refers to counties' economic analyses, but does not specifically indicate what is incorrect about the agency method – other than it arrives at a different answer. If there is a significant difference of opinion, as there may be in this case, then the remedy provided in CEQ regulations (§1502.9(a)) is to report both opinions in order to meet the disclosure requirement. This approach was taken in the DEIS by reporting the results of NPS studies and the reports from each cooperating agency. Page 83 of the DEIS makes reference to the use of source

information provided by the cooperators, all of which is presented in DEIS Appendix A. The characterization of the socioeconomic environment specifically cites information from the cooperators where applicable. On pages 298 through 315, the DEIS discloses the impacts of each alternative on adjacent lands in the cooperating agencies' own terms. Given this, NPS disagrees that the input from the cooperating agencies was not incorporated.
Page 5 Re: Threat of degradation of streams. The EIS must evaluate and disclose the effects of the alternatives for winter recreation use on water quality. The larger picture is in fact disclosed in the DEIS in the cumulative impacts analysis (page 321), which mentions other sources of impact including sewage effluents. The DEIS states that snowmobile emissions would appear to only add a very small increment of pollution to other more significant water quality impacts. Disclosure of the direct and indirect effects of winter use, and their additive effect on cumulative sources of impact is done in accordance with CEQ regulations (§1508.7 and §1508.8). The issue of water and sewage facilities is being handled in a different forum, and any analysis specific to this issue is beyond the scope of the winter use EIS.
Page 6. Adaptive management remains a choice in the range of alternatives. NPS will continue to work with State and Local governments regardless of the alternative that may be selected. NPS cannot share its responsibility to make decisions on winter use in the parks.
Page 7. Re: Lack of scientific information. Concerns are noted. The EIS analysis is aimed at developing a programmatic plan (§1508.18(b)(2) and (3)) for winter use. If the concern relates to lack of site-specific information, it should also be noted that there is no burden to develop site-specific information to support a programmatic planning document. Without further information, we are unable to address general concerns as to what is meant by inadequate science. An EIS is not, per se, a scientific analysis. It is intended to disclose environmental effects over a range of alternatives, in which the analyses must demonstrate scientific integrity by disclosing methods and making explicit references to sources used (40 CFR 1502.24). The DEIS does this. CEQ regulations also allow for incomplete or unavailable information, by describing procedures that are to be following in these instances (§1502.22). Any identified gaps in the FEIS will follow the requisite procedures.
Page 8. The establishment of an interim visitor carrying capacity is a function of the decision to be made. To help facilitate the decision, setting a seven-year average cap will be considered as mitigation for one or more alternatives.
Page 8. Re: Wildlife carrying capacity. Work accomplished by biologists on defining the wildlife affected environment and the effects of winter use on it are cognizant of the carrying capacity issue. Such determinations include many factors other than those associated with winter use. For this reason, NPS holds to its determination that setting, or determining, carrying capacities is beyond the scope of this effort. Steps are being taken to make the winter use EIS analysis as consistent as possible with that of the Bison EIS. NPS will clarify this issue as much as possible in the final document.
Page 8. Re: Dispersal of activities. Colter Bay is considered as a staging area for snowmobiling and snowcoaches in alternative D, and for snowcoaches in alternative G. These alternatives in effect provide the opportunity for visits to Flagg Ranch as an oversnow experience. Yellowstone NP increases day use facilities in several alternatives, but it is deferring consideration of additional wintertime, overnight facilities pending the concession plan. The draft concessions plan for Yellowstone National Park is currently being written and will be available for public review in 2001.
Page 9. The suggestion of expanding nonmotorized opportunities away from main motorized routes, serviced by skier shuttles, is consistent with both current management and other alternatives.
Page 9. Re: 1998-99 Winter Survey. Winter recreation use figures are being updated to include the current year. The assessment of visitor use and access will use the best available information from surveys and other data sources.
Page 9. Re: Ideas considered but not included. Presuming the commenter refers to Appendix A, Volume II, NPS feels that the rationale given in that section is sufficient to explain why the options were not viable or appropriate for this EIS.
Page 10. Re: Draft Report. Comment reviewed by economics consultant. Method is explained in the final report and the FEIS.

Page 10. Re: Specificity. Presuming the commenter refers to Appendix A, Volume II; NPS feels that the rationale given in that section is sufficient to explain why the options were not viable or appropriate for this EIS.
Page 10. Omissions and Research Gaps: Point 1. The report by Dr. Taylor is listed at the beginning of the appendix among other reports and data submitted for review and incorporation by the cooperating agencies. Dr. Taylor's report, and the other information, was used by NPS' economic consultant in the preparation of the socio-economic analyses.
Omissions and Research Gaps: Point 2. The cooperating agencies have to date identified no conflicts between any of the alternatives evaluated and any provisions of land use plans for state or private lands (if such plans exist). Similarly, none of the counties have identified specific conflicts between any of the alternatives and any current or existing county plans. This would be a function of the special expertise of state and local governments, and NPS would welcome this information cited as necessary to relevant portions of plans.
Omissions and Research Gaps: Point 3. Cooperating agencies are discussed on page 9 of the DEIS. At the end of this short section, a reference is made to the agreements to be found in Appendix I. The table of contents for Volume II indicates that Appendix I contains these agreements. The information is present and locatable. NPS will consider elaborating on the cooperating agency provisions of the CEQ regulations in the body of the document.
Omissions and Research Gaps: Point 4. NPS fails to see the point. Subnivian fauna were dismissed as an impact topic, page 81 of the DEIS.
Omissions and Research Gaps: Point 5. The DEIS discloses impacts, if any, on geothermal areas. It is not clear what is being referred to.
Omissions and Research Gaps: Point 6. Additional information is available from recently completed visitor surveys subsequent to the publication of the DEIS. The FEIS will incorporate it.
Omissions and Research Gaps: Point 7. For programmatic analyses information need not be exhaustive, and decisions can be made where data is uncertain. Certainly it would be reasonable to pursue focused monitoring along these lines where the uncertainty may be critical to a decision.
Omissions and Research Gaps: Point 8. NPS agrees.
Omissions and Research Gaps: Point 9. The ARD report and events surrounding its release had nothing to do with the DEIS or the process used in writing air impacts analysis.
Page 12 Re: Analysis. The comment refers to background information for cultural resources located in Appendix C. Analysis of cultural resource impacts occurs in the body of the DEIS.

Memorandum

RECEIVED
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DSC-PM

To: National Park Service 14
From: Dr. Mary Meagher
Subject: review of Yellowstone draft winter use EIS

Nov. 17, 1999

Thank you for the opportunity to review the draft winter use plan EIS for Yellowstone National Park. After 40 years of close association with Yellowstone I recognize the complexities of the biological, economic, political, and social facets of this effort. However, I will confine my comments solely to biological aspects, specifically the bison population of Yellowstone.

I wish to emphasize here that the bison population of Yellowstone is unique and cannot be matched or otherwise replaced. This is the one location in the United States where wild bison survived the slaughter of the last century, and persisted as a wildlife species. Additionally, according to recent DNA research, this is one of the few populations that has not been contaminated by the introduction of bovid genes, likely because this has been a closed population since 1902, when bison from fenced populations in Montana and Texas were brought to the park to supplement the remnant original wild population. Finally, this population has provided and is providing unmatched insight into ecological facets that cannot be duplicated elsewhere for scale and behavioral ecology. As such, the Yellowstone bison serve as something of a window of insight into landscape and land use patterns as occurred when bison were the dominant ungulate on the Great Plains more than a century ago.

By way of identifying myself, I have been the large mammal ecologist with research responsibilities for this population from the early 1960's until I retired in late 1997. My involvement with the topic continues to the present as I work with colleagues at Montana State University (Dr. Mark Taper, specialist in analysis of population dynamics, graduate student Chris Jerde) on the computer-assisted analysis of the long-term population data. I regret that the initial analyses have taken so long; several years were required to transcribe the aerial survey raw data from field journals and enter over 22,000 lines representing 25 variables into the computerized data base. Additionally, we have made 3 major efforts to validate and verify the entries for accuracy. The initial work has provided information consistent with the narrative description of winter recreation-induced population changes made by me in an unpublished first draft report dated 1993 (which was made available as such to park management at that time). The initial analyses are consistent also with descriptive overviews presented by me at the brucellosis symposium in Jackson, WY in 1994, and at the bison symposium in Bozeman, MT in 1997. For the initial analyses I refer to our co-authored report completed 15 November 1999 (Taper M.L., M. Meagher, and C.L.Jerde Spatial aspects of bison density dependence in Yellowstone National Park. 29 pp. Report for fiscal 1999; submitted to Dr. Peter Gogan in fulfillment of a USGS contract). Additional analyses will be forthcoming without identified target date at this time. We also intend to present our data in various peer-reviewed technical publications as appropriate.

Here, I wish to emphasize that these comments on the EIS are my own because of the deadline of 30 November 1999. All alternatives (except A, no action) have parts that are pertinent to the bison situation, but none offer a solution to what is happening biologically inside the park. Nor does the separate effort of a bison management EIS address the within-park changes and the future of this special population.

Roads in the interior of the park (excluding the northern range, Mammoth to Cooke City) that are snow-packed and used by oversnow vehicles have changed the energy parameters for this bison population beginning with the winter of 1981-82. The role of the roads seem to be misunderstood; for bison the roads are not roads as we see them. Rather, sections of roads function as energy efficient linkages between places that bison want to be according to conditions at the time of use. Nor do the snow-packed roads serve as travel exits for bison to leave the park, with rare exceptions (East Entrance for example), and in contrast to statements made by other persons that I have read. I make this assertion with certainty, as the primary research person..

For bison, the numbers of oversnow vehicles and levels of human use are not the issue, it is the existence of a snow-packed road system in the interior of the park. recognizing that not all road segments are used, particularly as the bison have adapted to the changed system and learned routes and destinations. However, this situation has changed the parameters of the ecological system that previously governed bison population numbers, distribution , and movements (see my 1973 monograph: the bison of Yellowstone National Park) This unprecedented biological situation makes the problem an all-or-none kind of topic, and particularly difficult for managers. The situation has evolved , with changes now for nearly 2 decades, beginning with the winter of 1981-82, when the bison population of the time reached ecological carrying capacity for the conditions that existed that winter. The mortality within the park was unprecedented in my years of research; I was able to field sex and age approximately 300 dead bison but mortality was undoubtedly higher. That same winter the bison showed stress dispersal, resulting in their beginning to explore and use snow-packed road segments and learn expanded range-use areas. Although the snow-packed road system or parts thereof had existed for some years prior to the winter of 1981-82, the interaction of factors did not force the learning process to begin earlier. This is complex biologically; I know of no comparable precedent involving a large ungulate population, world-wide. 2

Bison numbers roughly doubled between 1982 and 1994, but more importantly, the proportionate distributions changed hugely. Let me offer one comparison here. Approximately 2400 bison comprised the Yellowstone population early in the winter of 1981-82. No population use occurred west of the Firehole (this excepts the occasional wandering bull). Note also that the lands west of the Firehole did not serve historically as a wintering area (Meagher, 1973, mentioned above). At the beginning of winter 1999-2000 (Sept. 1999, John Mack unpub. data) the population level was essentially the same. Note however that large numbers of bison now use lands west of the Firehole; this use by mixed groups began in the mid-1980's and increased subsequently in both numbers and time. In other words, the park is supporting the same number of bison, but with a large portion utilizing the lands west of the Firehole, and not necessarily just in winter. However, a look at a map of park snow depths as developed by Phil Farnes shows a habitat that does not provide reliable winter range. Most of the area closes out access to winter forage for bison with an average to above average winter (snow course data). This comparison indicates that bison are using less desirable habitat (from a bison perspective) because the traditional habitats used historically and prior to 1981-82 when changes began will no longer support the same numbers.

The implications of the above paragraph are ominous. As presented here, my comments are not intended to be comprehensive; they are an overview. It is my professional judgment that to continue the winter use of the interior park roads as now occurs will result in driving the bison population level downward, because the bison will be removed when they exit the park, and numbers within the park will not again increase as they did between 1982 and 1994.

How far downward will a continuation of this winter situation drive bison numbers? I don't know, nor can I project the time frame over which this will occur. We are looking at interactive variables of bison numbers, distribution, habitat change, climatic trends and variability, and bison removals outside the park. I can be certain of the pattern. Let me add that the trend toward warmer winters could compound the situation more quickly, especially when we consider that one of the weather projections is for greater extremes on occasion. Recall the winter of 1996-97.

Please understand that I do not advocate closing Yellowstone National Park in winter to use by visitors. What I do advocate is that the use by people be tailored to unique aspects aspects of the park, enjoyment of which will still protect the natural resources, specifically a bison population that is, once again, responding to a natural system rather than human-induced changes in ecological parameters. I recommend maintaining (plowed, as now) the road from Mammoth to Cooke City. This road allows an unprecedented wildlife "show" unmatched elsewhere in North America. Because of the natural topographic and environmental gradients presented by the drainage of the Yellowstone River, restricting the road use by people would not gain much biologically versus the very real values to be had by human use (this recognizes a necessary control of cross-country skier use of ungulate winter ranges).

My second recommendation for enjoyment of the park by people suggests access in winter that would focus on the Old Faithful area as a terminal destination. The road from South Entrance through West Thumb and in to Old Faithful could continue to be used by oversnow travel without a significant wildlife issue. This would continue to allow people to see a major geyser area in the truly special conditions of winter..

Regrettably, no other solution will maintain a bison population within Yellowstone National Park that functions according to fluctuations in natural ecological parameters. After nearly 2 decades of learning from and thinking about the ramifications, I see no other biological solution. No other approach will preserve this unmatched natural resource that the agency is charged to protect. If the park were not home to bison with their stolid temperament and energy requirements in this harsh habitat, then the winter road system in the park's interior would not pose this all-or-nothing situation. But the bison were here first.

May I offer a question. Long-term, do we now wish to emulate the poachers of the last century who nearly succeeded in exterminating the Yellowstone bison?

With regret, knowing fully the difficulties the data presents. But data is data, and I would be less than professional in my obligations to Yellowstone National Park to refrain from providing this comment.

2

[redacted]
Page. 1. Re: "Yellowstone bison serve as a window of insight..." NPS appreciates the value and uniqueness of the bison population; the bison discussion and analysis will be revised as necessary in the FEIS.
Page. 1. Re: None of the alternatives offer a "solution" to what is happening biologically in the park. This comment refers to alternative formulation, which is discussed in the DEIS on pages 21-22. Alternatives were formulated based on concepts generated during public scoping and interagency workshops that best responded to identified major issues and concerns, the decsion to be made, and the purpose and need for the Winter Use Plan. The alternatives were not formulated to "offer a solution" to the bison issue.
Page. 1-2. Re: The fact that: 1) groomed roads do not facilitate bison movements out of the park, 2) the issue of how many vehicles and people is not important, the issue of the groomed roads is central, 3) the combination of a population at carrying capacity in 1981-1982 led to the bison beginning to use the groomed roads to seek out other range options, and 4) resultant change in distribution, not number, of bison led to bison use of lower quality habitat. Many of the commenter's statements about bison are referenced in the DEIS on page 166. If there is a significant difference of opinion, as there appears to be in this case, then the remedy provided in CEQ regulations (§1502.9(a)) is to report all opinions in order to meet the disclosure requirement. Thus, the findings of other bison researchers are disclosed as well.
Page. 2. Re: Winter use of the interior park roads will drive the bison population down because they will be removed when they leave the park, and numbers will not rebound due to poor range quality. NPS is evaluating the effects of groomed roads on bison and will revise the discussion of effects in the FEIS if necessary.
Page. 2-3. Re: Recommends keeping the plowed northern road open, and allowing access to oversnow vehicles only from the South Entrance to Old Faithful. This comment refers to the decision to be made. This suggestion is a feature of alternative F. Consequently, the decision maker could choose it from among the range of alternatives presented in the FEIS.

Rick Meis   *Box 5086 Bozeman MT 59717*

[redacted]

November 29, 1999

Clifford Hawkes
National Park Service
Denver Service Center
12795 W. Alameda Parkway
Lakewood, Colorado 80228

yell_winter_use@nps.gov

Dear Mr. Hawkes,

I first visited Yellowstone National Park in the winter in the seventies. On skis. And I have continued to do so most years since, whether for day skiing or multi-day backcountry trips. You have a problem. You knew it then and have waited until you were forced by the courts to address the issue. So you have displayed a lack of credibility and foresight in managing our parks.

I have followed this issue fairly closely for years. And I must say the NPS has outdone itself this time with both a nonsensical proposal and with an DEIS that is wrought with problems and contradictions. I would normally try to be diplomatic in a letter of this type, but *HELLO??* Can you hear anybody over the roar of the snowmobile lobby?

My first question for which the public deserves an answer is: Are you out to make a decision that is in the best interest of our national parks, or placate a barrel full of politicians, vested economic interests and a very loud and resource-destructive cadre of the public? I would urge you to go back and read the history of YNP and remember how tough important decisions were to make in the past.

OVERVIEW

In keeping with it's mission, the National Park Service needs to stand strong and take some innovative approaches to managing the very thing that causes anguish even in areas designed for them, namely individualized vehicles. Air and noise pollution from snowmobiles has become nearly inescapable in many areas of Yellowstone Park. The thousands of snowmobiles that create this health hazard pour out more pollution in a single weekend than automobiles emit in Yellowstone in an entire year. Something must change after thirty years of escalating impacts that the NPS has failed to address.

The question at hand is not one of whether people can visit Yellowstone and Grand Teton National Parks but how they visit; there is room for dramatic improvements. The parks can restore air quality and stillness while enhancing the visitor's experience. This can be accomplished by adopting a transportation system that provides access to the parks with less emphasis on individual vehicles.

The preferred alternative of the NPS misses this opportunity. Plowing Yellowstone's most traveled road would add a burden of automobile traffic while continuing to allow congestion and pollution from snowmobiles – exacerbating the problem, not managing it. Instead of ensuring protection for winter-stressed wildlife and other sensitive resources, the NPS proposal would create new pressures on this fragile winter landscape. A step in the wrong direction.

This planning process is the result of the 1997 (Fund v Babbitt) lawsuit alleging failures by the NPS to comply with the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), and other federal laws and regulations in connection with winter use in the three national parks. The NPS subsequently settled the suit, in part, by an agreement to prepare a comprehensive environmental impact statement (EIS) addressing a full range of alternatives for all types of winter use in the parks. I question whether the draft environmental impact statement (DEIS) has fulfilled that portion of the agreement.

The DEIS states that '(w)inter visits to the 3 parks have increased from virtually none 30 years ago to more than 100,000 per year by 1980. The parks' winter activities have become an important part of the region's tourism industry. Increased winter use has raised concerns about impacts on park resources and values.' It is now time that more specific policies and management direction is implemented to promote winter use that reduces the significant impacts that have occurred in the parks and protect sensitive resources.

DESIRED VERSUS EXISTING CONDITION

The need to develop a Plan is indicated by the difference between desired conditions and existing conditions. Desired condition is supposed to reflect the parks' mandates and missions.

In the Desired Condition section of the DEIS, the NPS spends an inordinate amount of time discussing the visitor and visitor needs. Remember that the visitor is important in that they 'do not adversely impact sensitive natural resources, air quality, wildlife, cultural areas, or the experiences of other park visitors.' This must be made the driving mandate of this planning process.

Are "enhanced visitor experiences" attainable when in violation of the above mandate? The preferred alternative does not call for an actual reduction of impacts but simply some mitigation on the increase in use and problems. Little attempt is made to achieve a desired condition other than via lip service.

A summary statements of desired condition says '(v)isitors know how to participate safely in winter use activities without damaging resources.' The DEIS completely ignores how to meet this in reality. Another: '(s)nowmobile sound and emission levels are reduced to protect employee and public health and safety, enhance visitor experience, and protection of natural resources.' How can this be accomplished if no efforts to restrict or reduce the tremendous growth we have seen in snowmobile use in the parks? Elimination of individual vehicles would accomplish it better than any other method beyond doubt.

In the Existing Condition section, the NPS states that '((l)and managers, constituencies, and users of the public lands disagree about the appropriateness of certain uses, the amount of various uses being provided, and the effects of those uses. These unresolved issues and concerns contrast with the desired conditions expressed above, and represent the need for a new Plan ...' The DEIS goes on to discuss visitor access, issues, safety and resources, not the least of which is wintering wildlife. I have great concerns that the proposed alternative will have an adverse impact on natural resources including wildlife, air quality and natural splendor (including quiet).

Community expectations for winter visitor use in and around the parks represent a part of the context for these issues and concerns. It is way past time that the natural environment is put ahead of economic development interests in communities which have come to expect unwarranted support from the NPS. These economic expectations are sometimes disconnected from concerns about the parks' capacity for growth and resource capability to sustain increasing use. The NPS has failed to address this to the long term sustainability of the parks for the last 20 or more years, and now is the time. But the DEIS fails to do more than placate these economic interests at the expense of the natural setting of the parks. The private sector in the gateway communities is much more resilient and capable to withstand change than is the wintering wildlife and water quality.

ALTERNATIVES

The list of alternatives does not include a no-snowmobiling (alternative G has a caveat to allow them back) or no trail grooming alternative as was specifically discussed during the lawsuit settlement and was supposed to be included in the DEIS.

In violation of NEPA, the DEIS does not include an overly broad array of alternatives, but simply lists alternatives that either maintains the status quo or promotes increased use. Alternatives F & G begin to propose an "alternative" but have not been well fleshed out as compared to the 5 pro-degradation alternatives. These are national parks we are planning for here – Yellowstone National Park – not the K-mart parking lot. The NPS has completely to adequately address partial closures, numbers restrictions, or any variety of truly mitigating alternatives. Why were not 5 restrictive alternatives looked at and only one pro-snowmobile alternative in the DEIS?

The DEIS states that the preferred alternative 'would be a commitment to the development of acceptable measures for mitigating impacts, consistent with criteria in 36 CFR 2.18.' I do not see how you can call this alternative acceptable for mitigating impacts. It does, over a long period, mitigate some of the human impacts like air quality and noise, but even then it does little to account for uncontrolled increasing use. It does not address this increasing use in any reasonable fashion. It does a poor job at addressing the natural amenities, especially wildlife, the protection of which is the charge of the NPS. The PA has no true mitigating measures to address the staggering impact of individual vehicles on wildlife, water quality, etc.

The DEIS discussion of 'alternatives considered but eliminated from detailed study' fails the NEPA requirement for a broad array of alternatives as stated above. It does not matter whether you have already – with the cart ahead of the horse – decided that to eliminate snowmobile use in the parks is unacceptable or not. It is a viable alternative, by law, and thus worthy of consideration. The DEIS states that '(o)versnow motorized use is considered to be within the range of recreation opportunities to be provided. Total elimination of oversnow motorized use without analysis would not be within the scope of the purpose and need for action.' Given the court settlement, I believe you are wrong. This is a national park we are planning for here, not the K-mart parking lot.

The DEIS goes on to state that '(a)lternative G approaches this issue by eliminating snowmobiles in favor of access by snowcoach mass transit. However, snowmobile use is allowed (on designated routes only) under NPS regulations (36 CFR 2.18). A determination must be made that their use is consistent with parks' natural, cultural, scenic, and aesthetic values, safety considerations and management objectives, and will not disturb wildlife or damage park resources.'

This smacks of a decision having been made ahead of the DEIS. This is a violation both mission and law.

The DEIS states '(w)ithin the range of alternatives in this DEIS, there are a variety of features that close various portions of the parks to various types of winter uses. Comparisons of effects can be made ... Since our data are presently not conclusive in all instances, two alternatives, B and E, are constructed around adaptive management themes.' Alternative F the only alternative to offer what the NPS trying to get at here and misses for the blinders. This alternative 'closes pending study' parts of the park to use. This what should be done in the first place if damage to the resource is in question. This tells me the NPS planners did not take this alternative seriously.

WILDLIFE

The NPS has not donned thinking caps in the examination of wildlife, specifically the grizzly bear. Okay, the swans may have been dealt with reasonably.

Extending the season, as proposed in the PA of the DEIS, goes against good planning for management of the grizzly. The DEIS states that 'no impact would actually occur relative to existing den proximity.' Although there are no known denning sites in the immediate proximity of the road corridors, the bears are in hyperphagia up until they hit the hay for the winter, which on a year like this can be well in to December. Under normal circumstances they are very active and cover a large area seeking food. Most years the whitebark pinenut crop is not very good, and the potential exists for them to be down in the road corridors until denning. The grizzly can cover a couple hundred square miles in this period which puts these corridors in the important feeding range.

With the known decline of the whitebark pines being imminent, this poses a new problem as the bears are more likely to be in the lower areas and riparian zones seeking replacement food (in lieu of pinenuts). The DEIS does not address this. It is an extremely viable likelihood that the PA will lead to conflict. If there is room for error, we must err in favor of the bear.

There is significant potential for a lag effect in the population to food sources which the DEIS did not address. The NPS must act with caution in this (and other) impactive processes. It is important to not begin the winter season any earlier than it currently is. It is also important for the grizzly that the end of the winter season be rethought. In all likelihood, the grizzly will become even more dependent on carrion in the spring, and the ideal place for them to look for it is, of course, the geothermal areas below Old Faithful and at Norris. These areas are already known to be underutilized by the grizzly in early spring considering the amount of winter kill available. This is undoubtably attributable to the impact of human use during this critical period.

None of the above issues were properly delineated in the DEIS. Below are a couple other issues that where problems were addressed but arbitrarily dismissed.

The DEIS states, '(d)isplacement and energetic cost are lessened when travel is more predictable and less dispersed. Shuttle busses on roads between West Yellowstone and Old Faithful may lessen displacement of wildlife relative to alternative A.' That is poor reasoning at best. Come now. Analogous to the difference of beating a child with a 2x4 or an iron bar. First, if this is so, then it is justification for Alternative G over the preferred alternative. Second, it totally justifies a "no snomobile" alternative that the DEIS dismissed (above).

In the "Rationale for the Preferred Alternative" the DEIS states that '(a)ll other impacts associated with snowmachine use would remain the same as in alternative A.' This is commonly used in the DEIS. As has been proven in court, no action is unacceptable. If this is the conclusion, it follows that more limitations are called for. Again, this proves that the DEIS contradicts itself; it totally justifies a "no snomobile" alternative.

A major contradiction exists in the discussion of nonmotorized uses which the DEIS states 'can cause ungulates additional energy expenditure and reduce individuals' chances of survival.' As a skier, I agree. I draw your attention to the oft misquoted Forest Service study (of which my copy has disappeared in the loaning process) that summarizes that the impact from snowmobiles is far more significant as they are in such greater number and penetration that when they stop and an operator stands, the individual impact is the same as with a skier. Remember that the vast majority of the non-motorized use around geothermal areas is brought there on individual snow machines. This is an important correlation. The DEIS states that the PA 'mitigates potential effects associated with these activities in YNP by eliminating unregulated backcountry use in winter range.' Again, if this is the case, then snowmobilers should *not* be allowed to stop or stand up or walk in winter wildlife range (the geothermal areas). And if the NPS is looking out for the wildlife, why do they propose to have tens of thousands of people travel into this winter range in the first place?

CONCLUSION

I am completely opposed to the preferred alternative. As the DEIS proved but did not conclude, the use of individual snowmachines are a significant impact which best can be mitigated by using mass transit. The preferred alternative is unacceptable.

Alternative G is unacceptable in that it retains the caveat of allowing individual snow machines back in the parks in the future. This is unacceptable.

The best option available so far is the "Citizen's Solution" as presented by the conservation community.

1) All over-snow access in Yellowstone be provided by snowcoaches. Snowcoach excursions are a better substitute for the tens of thousands of snowmobile trips that spoil Yellowstone's clean air and natural sounds, and overwhelm road systems in Yellowstone and Grand Teton.

Snowcoaches carry up to ten people, providing opportunities for on-board education by the driver or a naturalist, as well as conversation between family members, friends, and fellow visitors. Snowcoaches will make it possible for equal numbers of people to see Yellowstone, but with a 90 percent reduction in the number of vehicles. This minimizes noise, air pollution and the sheer amount of traffic in the park, reducing stress on wildlife and enhancing the park experience for visitors. Similar transportation systems, with frequent trips that allows visitors to travel where and when they please, are already in place in Denali National Park and will be soon in Grand Canyon, Yosemite, and Zion National Parks.

The Park Service, when awarding snowcoach concessions, should give priority to gateway businesses to help their transition away from renting snowmobiles for trips into the national parks.

2) The Park Service conduct a study to determine the winter carrying capacity of both parks. Yellowstone and Grand Teton cannot support an infinite number of winter visitors. Asking them to do so will harm natural resources and strain aging infrastructure, such as sewer systems that already experience failures. Knowing the true limits of visitor pressure, the Park Service will be in a better position to follow its mandate—which requires a careful balance between resource protection and providing for the benefit and enjoyment of visitors.

3) The Park Service limit off-trail backcountry use by skiers and snowshoers where wildlife need additional protection. This merely extends the practice, already in place, of closing areas to hikers during other seasons when grizzly bears and wolves need additional security.

4) The east entrance to Yellowstone be closed during the winter season. Avalanche control efforts above this road are expensive and, worse, they involve military explosives that are not in keeping with the purpose of national parks. This effort, expense, and violation of park values is difficult to justify given the very small number of visitors who enter the east gate, all of them on snowmobiles.

5) In Grand Teton, the Continental Divide Snowmobile Trail be discontinued, the Potholes area should be to motorized use; and no new permits for snowplanes be issued. At stake is some of America's most magnificent "front country." These areas are accessible by automobile. Snowmobiles and snowplanes intrude on clean air, stillness, and natural sounds and are not necessary for accessing these areas. Accordingly, snowmobile use in Grand Teton should be phased out except for administrative use and where it is necessary to access private residences.

6) The Park Service conduct research and encourage studies by others on the needs of wildlife wintering in Yellowstone and Grand Teton. The winter season is a particularly difficult time for wildlife in both parks. Food is scarce. Temperatures are often severe. A better understanding of all stresses on wildlife—both natural and human-caused—will help the Park Service determine what levels of protection are needed.

I do hope the National Park Service takes the charge of the environmental study seriously. Anything less is do do an injustice to the people of this country. Some people in the gateway communities will react badly, but with a positive attitude, can adapt and do well from it. We must remember, we are talking the legacy of our national parks here, not the cashflow of a few shortsighted people.

Thank you for your time.

Sincerely,

Rick Meis
P.O. Box 5086
Bozeman MT 59717

cc: Schubert & Associates
Rep. Rick Hill
Sen. Conrad Burns
Sen. Max Baucus
Gov. Marc Racicot

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Page 2. The purpose and need for action is clear about the NPS mandate, as supported by Appendix C in Volume II, excerpts from legislation, executive orders, regulation and policy. Nothing in this material would indicate that adverse impacts are appropriate or acceptable when they impair park resources.
Page 2. NPS finds nothing wrong with the objective, as stated. NPS' analysis in the FEIS, using more quantitative information, will better disclose the impacts of the alternatives relating to visitor use and access. Also, on DEIS page 25, carrying capacities must be determined as a feature of any alternative that might be selected. Owing to court settlement time frames, NPS did not feel that such a complex task could be completed in association with the EIS and that the appropriate context for such a determination would be after a decision is made on the winter program.
Page 2. The impacts of all alternatives are disclosed in the DEIS. The final decision will depend on how the decision maker weighs the impacts as compared to NPS mandates, executive orders, regulations and policies.
Page 2. The settlement agreement required NPS to perform a comprehensive EIS on winter use. NPS did not interpret this requirement as stipulating the specific alternatives to be considered.
Page 2. NPS maintains that all alternatives address possible approaches to bridge the gap between existing and desired conditions. The issues and impact topics are addressed to varying degrees by the alternatives, as is normal in a NEPA analysis. The disclosed impacts do in fact show differences among the alternatives, and in all alternatives some aspects of the existing condition (alternative A) would be improved. The FEIS will express the differences in a more quantitative fashion. Please see the actions and assumptions common to all alternatives (DEIS page 25). NPS has the authority to address key issues by implementing management actions under special circumstances or conditions (including closures). The purpose of the EIS and eventual plan is to develop a programmatic plan that addresses ongoing adverse impacts through a legal finding and decision process.
Page 3. Re: DEIS does not account for uncontrolled increased use. Recreation carrying capacities must be determined as a feature of any alternative that might be selected (DEIS page 25). Owing to court settlement time frames, NPS did not feel that such a complex task could be completed in association with the EIS and that the appropriate context for such a determination would be after a decision is made on the winter program. The FEIS will express mitigation measures for some alternatives, including interim use limits.
Page 3. CEQ regulations require a range of alternatives sufficient to meet the purpose and need for action (§1502.13). The purpose and need for action is discretionary to the agency and the decision maker (§1500.4(g) and §1501.7(a)(2)) to set the scope of analysis. It is clear the commenter disagrees with the purpose and need. If the court settlement carried as much weight as the commenter feels, it seems there would be no need to actually perform an environmental analysis.
Page 3. NPS does not see evidence of pre-decisional behavior in this statement.
Page 3. NPS feels there is a valid range of choices in the existing alternatives. NPS has the latitude to mix features of alternatives in the final decision.
Pages 3-4. There have to date been no known or recorded instances of conflicts between winter recreation use and grizzly bears. This fact speaks volumes. This, coupled with the notion that the bear population is expanding, is a realistic view of the extent to which winter use might impact grizzly bears. The biological assessment to accompany the FEIS provides a detailed analysis. Winter use does not impact white-bark pine as a food source for bears.
Page 4. NPS stands by its conclusion that regular, scheduled traffic (whether motorized or nonmotorized) has less impact of this type than random human presence. As with many other comments, this statement represents a preoccupation with the preferred alternative or its "justification." The preferred alternative, or its justification, does not affect the range of alternatives available as choices for the decision maker, or the assessment of impacts. The only possible response to such comments on a DEIS is to change the preferred alternative in the FEIS. The preferred alternative in either document is not a decision.

Page 4. The court has not proven that alternative A is unacceptable. There is no court decision, only a settlement requiring the writing of this EIS. The EIS is the vehicle by which programmatic actions are evaluated in terms of their effects. Naturally, effects are relative to current conditions and it is perfectly valid to state that in some respects the effects would be the same as in "no action." Such a statement, taken out of context, is not tantamount to a finding of impairment.
Page 4. NPS finds no contradiction. When a snowmobiler stops and walks away from his or her machine, is the action that potentially affects wildlife a motorized or nonmotorized source? Both sources of impact are evaluated in the DEIS. Potential mitigation for the kinds of impacts raised in the comment includes a prohibition on stopping for either snowmobiles or snowcoaches. Nonmotorized uses can likewise be prohibited from entering areas where wildlife might be affected. These mitigations are either contained in or consistent with language in most alternatives.
Page 4. The preferred alternative will change in the FEIS.
Page 4. The statement by the commenter that any snowmobile use is unacceptable appears to be based on a personal opinion about impacts and a personal view of a certain group of users. The eventual decision is to be based on an assessment of documented impacts for all alternatives.
Page 4. Statements of support for The Citizens' Solution do not respond directly to information in the DEIS. That alternative most closely resembles alternative G in the DEIS. Support for a course of action goes to the decision to be made – and may be of interest to the decision maker but does not provide rationale that affects the DEIS analysis.

JOHN MUNDINGER CONSULTING for CREATIVE SOLUTIONS, llc

1414 Hauser Blvd Helena, MT 59601 • [redacted]

November 29, 1999

Mr. Clifford Hawkes
National Park Service, Denver Service Center
12795 West Alameda Parkway
Lakewood CO 80228

RE: Winter Use Plans and DEIS for the Yellowstone and Grand Teton National Parks and John D. Rockefeller Jr., Memorial Parkway

Dear Mr. Hawkes:

Thank you for providing the opportunity for public review and comment on the above referenced document.

In my opinion, this document is inadequate compliance with the National Environmental Policy Act. The CEQ Regulations specify that NEPA's purpose is not to generate paperwork, but to foster excellent action, §1500.1(c). To achieve that purpose, a well written NEPA document must begin with a clear definition of the problem to be solved by the pending action and the objectives that constrain the array of potentially acceptable solutions. This DEIS defines the problem with a general reference to the difference between existing and desired conditions. This format would be useful except that the document fails to specifically define the existing condition; the desired condition; the differences between the existing and the desired conditions; and, the relationships between objectives and desired conditions. The document also presents the relevant issues with very general statements.

The formulation of distinctly different alternatives and the framework for analysis of alternatives are dependent upon a clear definition of the problem, objectives and issues. In this DEIS, the deficiencies in Chapter One are compounded by similar problems in Chapter Two. The description of the affected environment and the corresponding sections in Chapter Four also are vague. Absent a clear framework for analysis of alternatives, it is difficult for the reader to determine what problem, if any, the National Park Service is trying to address and which, if any, of the alternatives are responsive to relevant issues.

Please also note the specific comments which are attached.

Sincerely,

John G. Mundinger

Chapter One

1. The "purpose and need for action" is the foundation for a thorough and objective NEPA analysis because it articulates the problem that the agency has an obligation to address. In this DEIS there is a substantial discrepancy between the purpose and need – "The need to develop a Plan is indicated by the difference between desired conditions and existing conditions" – and the event that triggered the preparation of this DEIS – the settlement agreement to the 1997 lawsuit. Following the logic in the Introduction, the National Park Service should have initiated the winter use planning process and associated NEPA analysis in response to the earlier than expected increase in winter use and the analysis contained in the report, Winter Visitor Use Management: a Multi-agency Assessment. That did not occur and the time frames specified by the settlement agreement are not adequate to support a thorough analysis of the complex issues that are addressed in this DEIS.

2. Chapter 1 does not identify the decision-maker or clearly describe the scope of the decisions that will be made pursuant to this DEIS.

3. The document should include further explanation of the applicability of Executive Order 11644, as amended by EO 11989, to the pending decisions. For example, snowmobiles are "off-road vehicles". However, the existing use in the Parks is not off-road but on established highways.

4. The "desired condition" includes reference to the need for cooperative work between the NPS and other entities. For that to occur, the planning process should foster a spirit of cooperation. However, the manner in which this document has been developed has tended to disenfranchise potential cooperators.

5. The difference between desired and existing condition establishes the purpose and need for action. The description of the existing condition would have been more useful if it had been presented as direct and specific comparisons with each of the elements in the desired condition. As presented, there is no clear indication of what the specific problems are (i.e. the purpose and need for this DEIS) or what needs to occur to resolve the differences. The purpose and need should be revised to emphasize that, while there has been earlier than expected increase in winter use, there is uncertainty about the consequences of increased use, especially regarding visitor conflicts, air quality and noise. Moreover, desired future conditions are not well defined in the existing winter use plans.

6. The discussion of issues should include a summary of the major issues raised by the 1997 lawsuit and a disclosure of how those issues were addressed in the DEIS.

7. The introduction to Chapter 1 includes the statement, "It is now apparent that winter activities are an integral part of the visitor experience in the GYA, and that more specific policies and management direction are needed to guide winter use in the parks and protect sensitive resources." The Brief Description of the Area includes the statements "The GYA has developed a national reputation as a winter recreation center..." and, "These communities provide a full range of visitor lodging, employee housing, which compliments the limited services offered in the parks."

Also note that the description of the existing condition includes the statement, "Economic development interests in communities expect support from land management agencies, since many business ventures are dependent in some way on the use of national parks and forests." These statements are correct. However, the document fails to describe the degree to which levels of winter use and growth in the industries that provide support services, especially in the gateway communities, have occurred in response to federal policies that authorized and, perhaps even encouraged, winter use in the National Parks.

8. Wildlife Carrying Capacities is identified as an issue or concern not addressed in the Plan/DEIS because it "is a complex effort outside the scope of this study and the decision to be made". By that logic it would be appropriate to exclude decisions to establish population objectives for the Parks. However, carrying capacity is not a management objective. It is a characteristic of the wildlife habitats in the Parks. An accurate understanding of carrying capacity is necessary to also understand the consequence of management actions on Park wildlife.

Chapter Two

9. Even though the document describes the process for Formulation of Alternatives, this section does not disclose the logic by which the alternatives were developed because the criteria are too general to know how each was used in the development of each of the alternatives. It is, therefore, unclear how the range of alternatives corresponds with the scope of issues. This deficiency compounds the lack of adequate problem definition in Chapter One.

10. This section includes the sentence, "*The concepts generated at the three workshops were evaluated by the NPS planning team in terms of their responsiveness to the major issues and concerns, the decision to be made, and the purpose and need for the Winter Use Plan.*" Similarly, Appendix A includes a description of how the cooperating agencies were involved in the formulation of alternatives. The appendix includes the statement (App. A, page 5), "*While formulating the draft preliminary alternatives, representatives of the National Park Service reviewed all of the management actions ...for:*

a. relevance to the purpose, need and scope of the document,
b. contribution to its goals, and
c. accordance with the dictates of federal law and the Park Service mission.

However, the document does not disclose sufficient specificity for the purpose, need, scope, goals of the DEIS or the decision to be made nor are there specific standards for each of the major issues. Without that specific information, the reader is not able to determine the responsiveness of each of the alternatives.

11. The Actions and Assumptions Common to all Alternatives includes, "Determine visitor use capacities based on studies that set indicators and standards for desired visitor experiences and resource conditions." While this information would be worthwhile, in the context of this document, it would seem to have greater relevance to the definition of the problem than as one element of the solution. If NPS does not know the indicators and standards for desired visitor experience, what are the issues related to visitor experience?

12. Alternative B includes very specific standards for air quality and vehicle sound. Comparable specificity should have been included in the description of present and desired conditions to establish that actions to achieve those standards are necessary and appropriate.

13. Alternatives B and E "emphasize an adaptive approach to park resource management, which would allow the results of new and ongoing research and monitoring to be incorporated, as it becomes available…monitoring results demonstrating disturbance to wildlife or damage to park resources would be cause to implement actions for mitigating these conditions (e.g. closure to winter visitor use or trail restrictions)." If NPS implements an adaptive approach, the DEIS should disclose the nature of new and ongoing research; monitoring methods; the standards by which it is possible to determine that disturbance to wildlife or damage to park resources is occurring; contingency strategies; and, the additional NEPA analysis required to support implementation of contingency strategies.

Adaptive management is appropriate for those situations in which 1) the responsible agency lacks important information pertinent to management of the natural resource system and 2) the responsible agency has a greater imperative to take management action than to wait for the additional information to be collected. Adaptive management is more than simply "learning by doing". The essential first step is to articulate the critical uncertainties, i.e. the important information that is unknown. Then, a management scenario is designed to both respond to the problem, based on the information that is known, and to test specific hypotheses regarding the critical uncertainties. A monitoring and evaluation strategy, developed prior to implementation, is critical to adaptive management. Similarly, adaptive management requires contingency strategies or a framework within which results of monitoring and evaluation will be integrated with on-going management.

The DEIS uses the term adaptive approach but the document fails to disclose the various elements that collectively comprise effective adaptive management. As presented in Alternatives B and E, the adaptive approach appears to be more a framework for arbitrary revisions to the final decisions, implemented without additional NEPA review, than a carefully designed adaptive management strategy.

The interdisciplinary team should be encouraged to review and include in the bibliography the following reference for adaptive management: Walters, Carl. 1986. Adaptive Management of Renewable Resources. Macmillan Publishing Company, New York. 374 p.

14. The Rationale for the Preferred Alternative section indicated that "the planning team utilized a decision-making process based on determining the advantages of different alternatives for a variety of factors and goals." However, the DEIS does not include specific standards for the criteria of visitor enjoyment, visitor access, resource protection, effects on local communities and health and safety. How is it possible to determine the advantages without an objective definition of advantageous for each of those criteria?

15. The discussion of Desired Condition in Chapter One included the following sentence: "Further, these desired conditions should be facilitated by cooperative work between the NPS,

other agencies, local and regional governments, communities, concessions, commercial operations, and the equipment manufacturing industry." Given that logic, Chapter Two should have included an alternative that emphasized cooperative efforts to achieve a clearly defined desired condition. Perhaps that alternative should have been the preferred. See comment #4, above.

Chapter Three

16. Impacts to vegetation were dismissed from the analysis because, "Oversnow motorized activities, as proposed in this document, are limited to roads (and their immediate margins) where such use is allowed during other seasons." This same logic should have been incorporated into formulation of the purpose and need for the DEIS. See comment #3, above.

17. The description of Nonmarket Values includes the sentence, "The main reason that visitors make the often long and expensive trip to see YNP, however, is not to dine in West Yellowstone or spend a night in a motel in Gardiner." That sentence is probably correct. However, it ignores the fact that people would not be able to enjoy the experiences they expect when they visit the Parks, if those kind of support services were not available.

18. The section on public health includes the sentence, "Violation of national standards did not appear to occur under these conditions because the siting criteria used to determine compliance with National Ambient Air Quality Standards (NAAQS) were written to deal mainly with interstates and other roads where people do not congregate on the road itself (Snook-Fessell 1996)". That sentence should be explained because it seems to suggest that the author pre-supposed that violation of standards had occurred and that the inability to document a violation somehow implicated the standards, rather than suggesting the lack of a violation.

19. Snowmobile emissions is and ought to be an important issue in this DEIS. Given the information, or lack thereof, in the Snowmobile Emissions Exposure, the DEIS should document the degree to which the present condition for air quality constitutes a problem. See comments #5 and #11, above.

20. The section on Air Quality Monitoring includes the sentence, "Few conclusive studies exist to help develop informed decisions to reduce the health and environment concerns caused by winter transportation." Where does the DEIS determine, specifically, that there are health and environment concerns caused by winter transportation?

21. The Chapter 3 section on Bison should be re-written to include more information from the section on the History of Bison in Yellowstone National Park from the DEIS for the Interagency Bison Management Plan, including the information in Table 13 from the latter document that summarizes the history of this population. Also, the two DEIS employ different methodology for analyzing impacts to bison. These differences must be reconciled and a consistent logic used for both documents.

The DEIS notes that park managers began a program to restore bison populations. However, it fails to note that the effort included the introduction of bison from captive herds to Yellowstone Park in 1902. The DEIS specifies the numbers of bison removals that have occurred during the various interim plans. However, the DEIS fails to note that, except for the period between 1967 and 1984, periodic removals of bison has been an integral component of bison management since 1902. As noted on page 145 of the Interagency Bison Management Plan DEIS, the average number of bison removed per year was actually greater prior to 1967, a period when the overall herd size was considerably smaller, than during the period since establishment of the policy of natural regulation. Moreover, large removals since 1967 have occurred as a consequence of significant increases in bison numbers and corresponding movements of bison from Yellowstone Park into Montana.

The DEIS suggests that, by the early 1980's, the population fluctuated around 2,000 animals in winter. The term "fluctuated" is not consistent with the population trend that is suggested by the actual counts of bison that are disclosed in Table 13 of the Bison EIS. The number of bison actually counted increased from 397 in 1966-67 to 556 in 1968-69 to 873 in 1973-74 to 1727 in 1978-79 to 2,229 in 1983-84 to 3,159 in 1988-89, the first year in which substantial numbers of bison were removed outside the park.

The two management plans approach the analysis of impacts to bison very differently. The Bison Management Plan and DEIS provided current population estimates and evaluated effects to bison relative to the number of bison that YNP is capable of supporting – a number that fluctuates between 1,700 and 3,500 depending upon forage production and availability and winter severity. The supporting information for this estimate was the bison population model that was developed for the DEIS that supported the wolf reintroduction plan.

The Winter Use Plan and EIS provided a current population estimate but made no reference to the number of bison that the park is able to support. However, it does suggest, based on reference to several papers by Dr. Meagher, that the population stabilized around 2,000 animals and that subsequent population increases occurred as a result of increased movements and range expansion, both a consequence of the use of groomed roads during the winter.

An alternative interpretation of the population data is discussed in "Brucellosis in the Greater Yellowstone Area" (Cheville et al. 1998). They note that the population growth rate for this herd was fairly constant during the early history of this herd and the period following the implementation of the policy of natural regulation. Moreover, their analysis suggests a decline in population growth rate beginning in about 1980, i.e. the point at which the DEIS suggests that major population increases and shifts in distribution were occurring as a consequence of bison using park-groomed roads. The authors also note that the absolute population growth rate (145 bison per year) was essentially constant before and after trail grooming. Thus, they concluded that "there seems to be little supporting evidence of an ultimate effect of road grooming on bison population dynamics." The DEIS, at a minimum, should have presented both interpretations and provided the rationale for concluding the implied relationship between the use of groomed roads and bison movements and range expansion.

22. The DEIS includes GTNP but the Bison section did not include a description of the bison herd in that park.

23. The section of Bison should include a discussion of the bison that migrate from the YNP interior, over Sylvan Pass and down the Shoshone River.

24. The Greater Yellowstone Interagency Brucellosis Committee has compiled population information for each of the elk herd units in the GYA. That information and the corresponding population objectives for each herd unit should be included in the DEIS.

25. The North American Lynx (Felis lynx) is a different, and not the currently accepted, name for the Canada Lynx (Lynx Canadensis), i.e. the same species, under two different names, is discussed in Chapter Three.

26. The definition of "Species of Concern" is confusing and, potentially, misleading. A better definition would be: a species for which data are sufficient to document that the species is in decline, but not to the point that a listing, pursuant to ESA, is appropriate."

27. Incongruous wording occurs in the "Aquatic Species, Amphibians and Reptiles" section. The second paragraph begins, "Many fish species are becoming endangered..." This sentence is immediately followed with, "No fish of the YNP area is listed under the Endangered Species Act."

28. The description of Ethnographic Landscapes includes the following sentence: Within the GYA, bison constitute an important element of ethnographic landscapes significant to American Indians. Technically, this sentence is correct. However, it should be noted that, since the establishment of Yellowstone National Park, public policy has limited the distribution of bison to the park, not the entire GYA. Most recently, this public policy has been articulated in NPS's 1986 Boundary Control Program; the 1995 settlement agreement between the Secretaries of Interior and Agriculture and the State of Montana; and, the Interim Bison Management Plan, developed pursuant to that settlement agreement.

Chapter Four

29. Table 34 describes beneficial and adverse effects as changes either toward or away from the desired condition. Absent specific descriptions of current and desired conditions, there is no benchmark for analysis and description of change. See comment #5 above.

30. The justification for methodology used to evaluate effects on bison is inadequate. The methodology is based largely on references to several of Dr. Meagher's papers and the conclusion that "Bison use of winter roads may have changed the energetics of bison ecology by facilitating shifts in the distribution of wintering groups within the YNP population, increasing the overall abundance of bison in the park, and leading to the dispersal of bison into new habitats within and outside YNP". This statement is an often repeated hypothesis. However, the hypothesis has never been tested with controlled studies. The DEIS acknowledges professional disagreement regarding the extent bison use roads and how this effects population dynamics. At

a minimum, the DEIS should disclose how the disagreement was resolved for purposes of this analysis and disclose the logic for that conclusion.

A very different perspective is presented by Cheville et al. (1998), see comment 21/22. They concluded that, "There seems to be little supporting evidence of an ultimate effect of road grooming on bison population dynamics". They also concluded that, "...it is unlikely that discontinuance of snow grooming will prevent their (bison) movements. The suggestion that discontinuing winter road grooming will contain bison better within YNP and that starvation and other natural factors will relieve the need for artificial control outside the park appears optimistic."

The methodology for evaluating effects on ungulates also does not include any information about the effects of plowed, rather than groomed, roads. At a minimum, the DEIS should disclose what is known about changes in bison distribution and migrations associated with the park closure and the initiation of snow plowing that occurs in the spring. During recent years, bison begin to leave the park in the West Yellowstone beginning in the fall. However, a major out migration from the Old Faithful area towards West Yellowstone and this shift seems to coincide with spring plowing.

It should also be noted that Yellowstone and Grand Teton Parks are deep snow areas. Plowing in such areas creates high snow berms and could create tunnels of snow along park highways. The DEIS should disclose the potential consequences of trapping bison and other ungulates in such corridors. At a minimum, information could be extrapolated from observations associated with the road plowing that occurs in the spring with present management.

31. The definitions of various levels of effects in Table 38 are very poorly worded. Moreover, given the methodology for evaluating impacts to wildlife and threatened and endangered and sensitive species, there are few objective criteria for determining measurability, perceptibility, localization or permanence of consequences.

32. The description of methodology for evaluating effects to Natural Quiet suggest that NPS has an obligation to manage for natural quiet for the sake of natural quiet and without regard for whether people have and are taking advantage of the opportunity to experience it. The survey suggests that tranquility, peace and quiet rank high in visitor expectation. At the same time, the majority of visitors expect motorized access to the parks. The analysis of effects on Natural Quiet should include reference to the number of people who both come to the park with the expectation of experiencing natural quiet and engage in activities that might afford them the opportunity to realize that expectation. How many people are using areas in the park at the various distances reference in Table 42 (and similar analyses for the other alternatives) and how many of them expect to experience natural quiet in those zones?

33. The analysis of each of the alternatives includes a description of the effects on bison as a cultural/ethnographic resource. However, the DEIS failed to disclose how it was determined that bison fit the definition of a cultural/ethnographic resource and the extent to which that determination is consistent with the National Historic Preservation Act. The DEIS should disclose that, while the spiritual and cultural relationship between Indian people and bison was acknowledged, bison were not considered to be a cultural/ethnographic resource in the

Interagency Bison Management Plan DEIS. Also, the DEIS did not disclose the methodology for analyzing impacts to bison as a cultural/ethnographic resource.

34. The discussion of Social Values for Alternative A included the statement, "Continuation of the current policies under the no action alternative would be in concert with the majority support by current winter users for continued winter mechanized access." A NEPA analysis should not be an exercise in conceding to the will of the majority. However, if an agency proposes to make significant changes to programs that are acceptable to the majority, it has an obligation to articulate the problem and the logic for the solution that necessitates change. This DEIS does not satisfy that standard.

35. The discussion of Ungulates for Alternative A includes the statement, "The most apparent adverse impact of winter migrations is that numbers of bison have been subjected to management actions as a result of other factors." That conclusion is not supported with any analysis to associate bison migration with the management actions that occur under this alternative. The removal of bison would be an adverse effect only if it compromised the bison herd. Without a clear definition of the bison carrying capacity in YNP, it is difficult to assess the effects of management actions.

The consequences of the no action alternative on bison would be clearer if there were greater consistency between this EIS and the DEIS for the Interagency Bison Management Plan. The latter document confirms that, under no action, out migrations of bison would continue and management actions to remove migrating bison also would continue. However, there is no information to indicate that management removals would compromise the long-term ecological integrity of this bison herd.

Perhaps the single most important conclusion that might be drawn from the history of this bison herd, as presented in the DEIS for the Interagency Bison Management Plan, is that, in spite of significant decreases during the latter half of the Nineteenth Century and periodic management removals throughout the Twentieth Century, the natural tendency of this bison herd is to increase. Cheville et al. (1998) apparently reached a similar conclusion. "The lack of stabilization of bison population growth over time since the natural-regulation policy was adopted suggests that bison have expanded like a wave from across suitable habitat in YNP with little diminution until now they are pressing against the borders of YNP in winter. The prospect, therefore, is for the bison population to increase over some years until the coincidence of a high population and a hard winter results in the population being reduced once again (as happened in 1996-1997). Given the lack of a dynamic equilibrium, the bison numbers are expected to start building again." This logic should at least be considered in the analysis of Alternative A.

36. The discussion of the effects of Alternative A on Cultural Resources should more clearly distinguish between effects on bison as a natural resource and effects on bison as an ethnographic resource. This comment also applies to similar sections in the analysis of the other alternatives.

37. The economic analysis for Alternative B includes a discussion of Minority and Low-Income Populations. What percentage of the survey respondents were from that group? How would Alternative B influence change in the percentage/frequency of visits to the parks by people from that group?

38. The analysis for Alternative B includes several references to adaptive management. However, the effects of adaptive management cannot be evaluated because the specifics of the adaptive management strategy are not disclosed. See comment # 13 above. The DEIS should disclose the potential contingency measures, the possible consequences of those actions and the decision-making process, including additional NEPA analysis, that NPS will follow to implement changes in the winter use plan.

39. The analysis for Alternative A of the effects of groomed roads on bison includes the following: "In YNP, bison use available groomed routes to move between areas of desired winter habitat, including thermal areas. Lacking groomed routes, they develop trails from beginning of snowfall through the winter and continue to follow those trails as a means of conserving energy." Yet, the analysis for Alternative B included no discussion of the effects of plowed roads, as compared with groomed roads, on the ability of bison to make energy efficient movements between areas (also note comment #30 above). The analysis also should have mentioned potential for increased bison movements from the park interior to the 7-mile bridge and subsequent migrations toward the West Yellowstone area.

40. The effects of plowed roads on ungulates are discussed from the perspective of habitat fragmentation. However, there is no discussion of "tunnel effect". The DEIS should have analyzed the potential for bison and other wildlife to be come trapped on the roads, between the snowberms; the consequence of coincident vehicle and wildlife use on the plowed roads; and, the increased potential for vehicle collisions.

41. The conclusion to the analysis for Alternative B includes the following statement: "The adaptive management provisions of this alternative require that if monitoring or scientific studies regarding winter visitor use, natural resources and other park values indicate that sections of the park must be closed or certain uses restricted to protect these values, all visitor experiences currently afforded in the area of closure would be eliminated. These areas of closure would result in direct adverse impacts to desired winter visitor experience." This description of adaptive management appears to be a set-up for the eventual closure of the West Yellowstone entrance to all visitor use and the possibility of implementing that change without benefit of adequate NEPA documentation.

42. Alternative E could be implemented but changes from current policy, pursuant to the adaptive management features of Alternative E, could not be implemented without additional NEPA analysis because neither the framework for making those changes nor the impacts of those management actions are disclosed in this DEIS.

43. The analysis of the effects on ungulates of the presence and use of groomed surfaces for Alternative F should disclose the effects, if any, on the movements and distribution of bison.

44. The analysis of the effects of Alternative F on adjacent lands includes the following statement: "If bison exit the park because groomed routes are available, and if those routes are no longer available to the west and north where much of the movement presently occurs, then there could be a significant movement of bison along south and east routes onto national forests. (See the discussion regarding effects on bison. NPS does not anticipate a significant movement.)" However, the various discussions regarding effects on bison elsewhere in the document provide little supporting information and there is no analysis to support NPS' anticipation that a significant movement would not occur.

45. The analysis of the relationship between local short-term uses and long-term productivity includes the following sentence: "The plan to be arrived at in a later decision document (Record of Decision) will set goals and objectives for management based on the alternatives evaluated in the EIS." While it is appropriate to finalize goals and objectives in the ROD, a preliminary set should have been disclosed in Chapter 1 of the DEIS. The NEPA process is more about evaluating alternative approaches to achieving a set of goals and objectives than evaluating management options that are driven by different goals and objectives.

[illegible]
Cover letter. An identified gap between existing conditions and desired conditions form the basis for the purpose and need for action. The underlying purpose (§1502.13), or goal to be achieved as stated at the scoping stage is to provide a full range of quality winter experiences offered in appropriate settings and having no significant adverse impacts on park values. This purpose is represented by the desired condition shown on page 3 of the DEIS. The underlying need (§1502.13) is defined by the existing conditions expressed on page 4, with detailed expansion in Chapter III, Affected Environment. Despite the complexities introduced by multiple goals and multiple issues, the alternatives in Chapter II represent possible actions that meet the underlying purpose and need. The commenter feels that the treatment of existing versus desired condition, et al, are too general to be of value. NPS feels there is a lack of understanding about the nature of the decision that is in question. It has been NPS' intent from the beginning of the process to prepare a programmatic Plan. This would be the purpose of preparing a "comprehensive EIS." There should have been no illusions that a plan of this magnitude would be based upon detailed, site-specific data in order to make every decision possible relating to winter use. It would certainly not be possible to accomplish this and avoid the criticism of generating voluminous paperwork. The programmatic approach is acceptable under the law, in the way that NEPA is the vehicle for producing NPS General Management Plans and USFS Forest Plans, and amendments thereto. Such documents make decisions and allocations at a general level and defer many site-specific types of decisions to a later date (§1508.18(b)(2) and (3)).
Point 1, page 1. See above response. The commenter should note that the Multi-Agency Assessment initiated in 1994 was in fact prompted by the increased use and the exceedance of a threshold described in the 1990 plan. Clearly, NPS was not moving fast enough for the complainant in the lawsuit.
Point 2, page 1. The FEIS will include a section on the decision to be made.
Point 3, page 1. The legal mandate section will be reviewed and clarified as necessary.
Point 4, page 1. There is a desire on the part of NPS to cooperate. The effectiveness of the process used in this EIS relative to cooperating agencies is subject to debate, especially given the short time frames as noted. Early on, NPS intended to invite the 3 states surrounding the parks to participate as cooperating agencies in developing the EIS. NPS believed the states could provide information on impacts to natural resources and local and regional economies. Without consulting with NPS, CEQ opined to a Wyoming Senator that counties also should act as cooperating agencies in this process. Thus NPS was faced with working with nine cooperating agencies, several of which had never before participated in a NEPA process as cooperators. Due to the schedule set by the settlement agreement, NPS had little time to work with cooperating agencies on what was expected of them in that role. This includes disagreements about the nature of special expertise in the NEPA process, and the burden of the cooperator in providing it. As a result, the cooperators often acted as though the relationship was one where the NPS was to provide information to them, instead of the reverse.
Point 5, page 1. See response to cover letter.
Point 6, page 1. The purpose and need for action and the major issues derived from scoping are not, and should not be a function of the lawsuit. The settlement required NPS to prepare a comprehensive EIS, not an EIS based strictly on the lawsuit issues.
Point 7, page 2. Re: Failure of the DEIS to describe the degree to which winter industry growth has occurred in response to federal policy. Pages 83-93 describe the affected social and economic environments. If the commenter has definitive information about this issue, he fails to reveal it. NPS does not feel this would be an especially relevant disclosure. Growth in winter use industries and increased use was not entirely at the behest of the federal government. Communities willingly engaged in these activities, and marketed them accordingly while NPS found supportive policies. The relevant frame of reference is, as indicated in the purpose and need for action, to determine the level of use that may occur without impairing park values.
Point 8, page 2. Work accomplished by biologists on defining the wildlife affected environment and the effects of winter use on it are cognizant of the carrying capacity issue. Such determinations include many factors other than those associated with winter use. For this reason, NPS holds to its determination that setting carrying capacities is beyond the scope of this effort.

Point 9, page 2. See response to cover letter. This is a programmatic EIS and planning document, which are general by nature (§1508.18(b)(2) and (3)). Each alternative concept, which is a paragraph appearing under the alternative title in Chapter II of the DEIS, links the alternative with objectives from the purpose and need section. The NPS planning team will review this linkage and clarify it if possible. However, NPS feels that the deficiency is overstated. All alternatives evaluated in detail respond to one or more needs identified in the existing condition, where the intent is to achieve one or more of the purposes described as desired conditions.
Point 10, page 2. NPS disagrees. In the light of programmatic (§1508.18(b)(2) and (3)) goals and objectives, there is sufficient specificity in the DEIS to view programmatic alternatives that are distinctly different. Program direction is made explicit in the legal mandate described in the purpose and need section. Standards for aesthetics, disturbance to wildlife, public safety, minimizing visitor conflicts, and other parameters implicit in the mandate are not described. However, it is possible to describe the general effects of winter use on those parameters for the consideration of the decision maker, who will determine at what level impairment may occur. With this determination in a programmatic plan, standards are in effect made for future management.
Point 11, page 2. NPS, being aware of the complexities of recreation capacity studies, felt that there was insufficient time to complete such studies before the court ordered settlement date for the EIS. However, numbers of users is recognized as an element of any impacts associated with winter use, so determining use numbers must be a part of the eventual solution to be reached under any alternative. Incorporating this as a common feature is a necessity. NPS performs analysis under NEPA, in part, by virtue of issues or potential impacts that accrue to a proposed action. It is not necessary to have specific indicators and standards in order to have an issue. Indicators or measures of impact for this programmatic analysis are presented in the consequences section of the document for identified issues.
Point 12, page 3. Purpose and need indicates there is a gap between existing conditions and desired conditions for air quality and sound in the parks. Alternative B and other alternatives prescribe actions, or standards for actions, intended to close that gap. The baseline for comparison is the existing condition, as reflected in alternative A.
Point 13, page 3. Processes associated with adaptive management will be provided in the FEIS.
Point 14, page 3. Program direction is made explicit in the legal mandated described in the purpose and need section. Standards for aesthetics, disturbance to wildlife, public safety, minimizing visitor conflicts, and other parameters implicit in the mandate are not described easily in a quantitative way. We refer the commenter to Table 2 on page 23 of the DEIS. For each management prescription, or zone, qualitative general standards are set. Then, these zones are applied to areas of the parks in different ways to discriminate between alternatives. Using qualitative terms, it is possible to describe the general effects, both beneficial and adverse, of winter use on those parameters for the consideration of the decision maker, who will determine at what level impairment may occur. With this determination in a programmatic plan, standards are in effect made for future management.
Point 15, page 4. The cooperators had an opportunity to participate through an alternative development workshop, as documented in DEIS Volume II, Appendix A. A majority of the ideas generated by the cooperators (about 75%) were incorporated into the range of alternatives in the DEIS. Some of the remaining 25% of ideas were not legally possible, and some were practices that could be considered for implementing any of the alternatives site-specifically. See also response to point 4.
Point 16, page 4. NPS finds the logic to be consistent where winter motorized use is being addressed. The various zone choices, or prescriptions, developed to analyze motorized use are assigned to various road segments in the parks by alternative. The alternatives thus formulated are consistent with the purpose and need for action. An example of cooperating agency suggestions (referring to the previous comment) that were not incorporated into alternatives were those that created new motorized routes in places that are not available for such use during other seasons.

Point 17, page 4. Commenter is referred to the material presented in the economics section of the DEIS (pages 83-88) which speaks to regional economies, employment and income associated with winter use in the GYA. This material has everything to do with services that are available and provided to winter visitors by local industry.
Point 18, page 4. Wording in this section will be reviewed and altered to avoid confusion.
Point 19-20, page 4. Refer to our responses to points 5 and 11. Health, safety and resource issues are evident in the description of the existing condition on page 4 of the DEIS. Given the programmatic nature of the document, as explained, the general impacts of winter motorized use on resources and public health are disclosed. The disclosures may be found throughout Chapter IV.
Points 21-24, pages 4-6. Point 21. The FEIS will be revised to include citations by Cheville et al. 1998. In an effort to better understand the relationship of bison movements and the use of the winter groomed road system, managers have instituted studies that address this issue. While groomed roads may have contributed to the redistribution of bison within park boundaries (Meagher 1997), it appears that bison tend to use waterways and off-road trails for much of their travel on the west side of the park (Bjornlie and Garrott 1998), and that much of their movement toward park boundaries may occur on such routes. Monitoring of bison movements in the Hayden Valley and Mammoth to Gibbon Falls sections of the park has found that less than 12% of bison movements occurred on the groomed road surface (Kurz et al. 1998, 1999). However, groomed roads may have allowed larger numbers of bison to exist in the park than in the absence of groomed roads, by allowing access to otherwise unavailable foraging areas, and westward redistribution early in the winter may predispose some bison to exit the park (Meagher 1997). Therefore closing of groomed roads could have the effect of reducing population size and shifting distribution back to patterns observed before grooming, thereby possibly reducing the magnitude of bison movements outside park boundaries. Conversely, bison are highly social and appear to retain and pass along knowledge through generations (Meagher 1985), so it is possible that closing groomed roads may not impact bison movements and distribution. Research is currently being conducted to better understand the relationship between road grooming and bison movement and distribution patterns. Point 22. A discussion of the GRTE herd will be included in the FEIS. Point 23. Mention will be made in the FEIS that bison migrate down the Shoshone. Point 24. A discussion of the population objectives for each elk herd is outside the scope of the FEIS.
Point 25, page 6. The lynx naming error will be rectified in the FEIS.
Point 26, page 6. A revised definition of "species of concern" will be provided in the FEIS.
Point 27, page 6. The discussion of fish will be revised in the FEIS.
Point 28, page 6. Ethnographic resources pursuant to bison: this material will be revised in the FEIS to be consistent with analysis presented in the Bison EIS.
Point 29, page 6. The benchmark is alternative A, the no action or current management alternative. That alternative describes the existing condition. Alternatives B through G are designed to move the parks toward the desired conditions (described on pages 3-4 of the DEIS) from the existing condition. Therefore, comparisons of beneficial and adverse impacts of each alternative are measured with respect to alternative A. Complexities are introduced by the fact that current management is not the "ecological baseline" or natural, unaffected condition. There are impacts associated with it that represent an identified need to change.
Point 30, pages 6-7. See response to Point 21.
Point 30, page 7. A discussion of the effects of plowed roads on ungulate and bison movements will be included in Chapter IV.
Point 31, page 7. With respect to wording in Table 38 of the DEIS: this section will be rewritten to clarify the effects presented in the FEIS as compared to the biological assessment; two new categories of effect well also be defined.
Point 32, page 7. The analysis of sound impacts will be updated in the FEIS. The extent to which motorized sounds affect the experience of other users will be addressed.

Point 33, page 7. Ethnographic resources pursuant to bison: this material will be revised in the FEIS for each alternative to be consistent with analysis presented in the Bison Management EIS/Plan.
Point 34, page 8. Based on the review of all DEIS comments, a great many people have no trouble identifying with the problems identified in the purpose and need section of the document. NPS does not know which "majority" of people is being referred to. The DEIS presents a variety of solutions, or alternatives; there will not be a solution until a decision is made and supported by rationale (or logic) expressed in the Record of Decision.
Point 35, page 8. Work accomplished by biologists on defining the wildlife affected environment and the effects of winter use on it are cognizant of the carrying capacity issue. Such determinations include many factors other than those associated with winter use. For this reason, NPS holds to its determination that setting carrying capacities is beyond the scope of this effort. The winter use FEIS will be made as consistent as possible with the Bison Management FEIS/Plan. It should be understood that the Bison Management EIS/Plan is not yet published, and no decision has yet been made for bison management. The final EIS for winter use will be made as consistent as possible with the final EIS/Plan for bison management in terms of analysis. Certainly the decisions will need to be consistent.
Point 36, page 8. Ethnographic resources pursuant to bison: this material will be revised in the FEIS for each alternative.
Point 37, page 8. The stated purpose of plowing the road (DEIS, page 28) is to "improve affordable access." It is not to "provide affordable access for minority and low-income people", as perceived by some commenters. As an aside, this would seem to be a worthy goal – the parks are for all the people, not just those who can afford to purchase or rent a snowmobile at the current rate. A thorough reading of the EIS would reveal that a required impact topic in an EIS is to evaluate the effects of a proposed action on socially or economically disadvantaged populations (DEIS, page 80). These populations are characterized on page 90 in the DEIS, and the effects on those populations are disclosed in the socioeconomic section for each alternative (DEIS, pp 176, 199, 224, 245, 260, 274, 288).
Point 38, page 9. Processes associated with adaptive management will be provided in the FEIS: definitions, administrative actions, study methods, management actions, and NEPA requirements.
Points 39-40, page 9. The DEIS discusses the effects of plowed roads on page 208. Although it does not explicitly mention bison, it states that plowed roads may provide "wildlife" with an energy efficient mechanism for movement. The FEIS will be revised to include the effects of plowed roads on bison migration. Although the DEIS does not use the term "tunnel effect" it does discuss the negative impact associated with snow berms along the plowed road corridor, and suggests mitigation (p. 209). NPS and the commenter disagree on whether or not a tunnel effect would result from plowing. In many other areas within and near the 3 park units, roads are plowed and no tunnel effect exists.
Point 41, page 9. Adaptive management will be better described in the FEIS, as noted above. Adaptive management is a strategy to move from the existing condition to the desired condition in two alternatives. The strategy represents a very deliberate way of proceeding, erring on the conservative side to maintain existing motorized use at the risk of possible short-term impacts on resources or other visitors. NPS fails to see how this might be objectionable to those who favor maintaining existing uses, such as the cooperating agencies. In fact, the cooperating agencies embrace this strategy as part of their Revised Alternative E. To see adaptive management as a ploy is purely speculative.
Point 42, page 9. Commenter's logic doesn't follow. Future management hinges upon the Record of Decision and the FEIS which supports it, not upon the DEIS. Any alternative in the FEIS could be selected. Future actions to be taken under the plans' programmatic direction (§1508.18(b)(2) and (3)) are likely to be subject to future NEPA, irrespective of whether the adaptive management strategy is involved. The level of NEPA that would be incurred by a proposed action is a case-by-case determination.
Point 43, page 9. The effects of plowed roads in alternative F are stated in the DEIS as being the same as in alternative A.

Point 44, page 10. NPS does not agree that significant bison movements would occur to the south and east if roads to the north and west were not groomed because bison make little use of the roads on the west side of the park for movements, and because bison use traditional winter range areas. For these reasons, NPS would not expect significant changes in bison movements simply because groomed roads were no longer available on the west side of the park. Additional information on bison movements will be included in the FEIS.
Point 45, page 10. Though the commenter appears to disagree, NPS has presented programmatic goals and objectives in Chapter I – in the form of desired conditions which all alternatives are oriented to. These are general by nature. The goals and objectives presented as an adjunct to the decision and the final plan would be different in terms of specificity. For example, an alternative is defined by a particular set of zones or prescriptions allocated to road and trail segments. Each zone is further defined by a set of goals, objectives or standards for management (as in Table 2 of the DEIS). The alternative that is selected in a decision therefore brings with it goals, objectives and standards that are consistent with the overarching purposes or desired conditions. NPS will clarify this planning hierarchy in the FEIS.

December 13, 1999

Clifford Hawkes
National Park Service
12795 West Alameda Parkway
Lakewood, CO 80228

RE; Winter Use Plan (DEIS) for the Yellowstone and Grand Teton National Parks and John D. Rockfeller, Jr., Memorial Parkway

Dear Mr. Hawkes:

Please accept the following comments on the Winter DEIS for Yellowstone (YNP) and Grand Teton (GTNP) National Parks and John D. Rockfeller, Jr., Memorial Parkway (JDRP). I strongly support *The Citizens' Solution for Winter Access to Yellowstone*.

The Draft Environmental Impact Statement for (YNP) and (GTNP) and (JDRP) examines seven Alternatives (A-G) for Winter Use. Of these Alternatives, the National Park Service (NPS) has selected Alternative B as the Preferred Alternative. In reviewing all the Alternatives, the NPS has made a valiant effort to please all parties concerned. However, it appears that by doing so, the NPS has failed to address the problems of winter visitation on the wildlife and natural resources in the Greater Yellowstone Area (GYA) that may have caused long lasting negative impact. Unfortunately the NPS's proposal to plow the road from West Yellowstone to Old Faithful will cause additional obstacles to wildlife and greater expense for taxpayers. The NPS proposal will transfer snowmobile pollution, noise, and congestion to other road segments while adding automobiles to the mix. The NPS preferred Alternative B fails to address visitor carrying capacity in winter, the impact on wildlife, and does little to protect the unique natural values of the GYA, one of, if not the only, remaining intact temperate ecosystems on earth.

My comments are based on the seven major issues as determined by the NPS from scoping, public comment and issues addressed in the DEIS. These issues are; visitor use and access, visitor experience, air quality, snowmobile sound, human health and safety, social and economic impacts, and natural resources.

Visitor Use and Access

I applaud the NPS in their Alternative B for utilizing public transportation for access to YNP from West Yellowstone to Old Faithful. However, plowing the road from West Yellowstone to Madison and Old Faithful is not the best method for winter access. The plowing of the road is an unnecessary expense for a Park Service who needs to use funds to fix the past problems caused by years of neglected infrastructure. Also, Alternative B relocates the current overused access by snowmobiles to other areas of the Park particularly the South Entrance. This form of access by snowmobiles will have a greater impact than stated by the DEIS on GTNP and JDRP. It is imperative that a winter carrying capacity study be funded and completed before increased activity by motorized and non-motorized forms of transportation is considered in less traveled areas of the GYA. A winter carrying capacity must be established to protect wildlife and natural resources and is a mandate of the Park Service as established by ..."the NPS Organic Act (16 USC 1, 2-4) and the General Authorities Act (16 USC 1a-8), which directs the agency to protect park resources and provide for the enjoyment of those resources in a manner that leaves them unimpaired for future generations." Is individual motorized use leaving the park resources unimpaired? I do not believe it is, given the amount of air, water, and noise pollution caused by these vehicles.

I support public transportation for winter access and would support the use of scheduled snowcoaches for oversnow travel from West Yellowstone, Mammoth, and Flagg Ranch. The snowcoaches should be newer, cleaner burning and less noisy models than those allowed in the past. This will add to the enjoyment of visitors to the Park. Through the use of snowcoaches, visitors will have continued access to Yellowstone National Park in winter, by way of one vehicle, multi-person occupancy that allows for opportunities to view scenery and wildlife, opportunities to experience quiet and solitude, and the educational experience of winter in Yellowstone through information programs as part of the snowcoach tour.

I support limits to off-trail backcountry use by skiers and snowshoers where wildlife need additional protection. *The Citizens' Solution for Winter Access to Yellowstone* addresses these access issues.

Under Alternative B in GTNP:

- I support auto entry at Moose and Moran to access the Park. Since these routes are in close proximity to US Highway 89 north of Jackson, this form of access makes sense.
- I support discontinued use of the Inner Park Road for snowmobile use. This area includes the Potholes and Signal Mountain.
- I support the phase out of snowmobiles on Jackson Lake. However, this should happen immediately, as this is an inappropriate use for Jackson Lake. What about the use of snowplanes on Jackson Lake? Will this also be phased out?
- I do not support moving the Continental Divide Snowmobile Trail (CDST) on the section from Moran to Flagg Ranch. Previously the Park Service stated that providing a separate corridor for the CDST was an inappropriate use and would have impacts to natural resources. In fact, the CDST should be closed in GTNP and JDRP. The proposal to pave a relocated section of the CDST and treat it like a bicycle path in other seasons is inappropriate, as it would not tie into any other bicycle path and the majority of present bicycle use is in the southern portion of GTNP.
- I do not support an ungroomed motorized trail near Shadow Mountain north to Triangle X Ranch and out to Highway 89. Also, the ungroomed section of the Moose/Wilson Road from the JY Ranch to Granite Canyon Trailhead should be for non-motorized travel only. This viewpoint is in agreement with the Greater

Yellowstone Coordinating Committee's report recognizing the need for quality front country non-motorized experience for skiers, snowshoers, and dogsledders.

- I do not support allowing any new permanent structures such as warming huts at Jenny Lake, Signal Mountain and Two Ocean Lake. We do not support further development of winterized lodging accommodations and fuel services in GTNP.

Visitor Experience

Visitor experience data provided in the DEIS is more heavily weighted toward the snowmobile enthusiast than other users. This is understandable given the present day use of the Parks. But, the DEIS was in response to a suit brought against the Park Service because of trail grooming in winter, and the fact that the majority of respondents to surveys you cited were users of the groomed trails, it appears that the survey results are not as appropriate in determining winter use as are air quality, noise, natural resources, and human health and safety. "YNP visitors reported gaps between importance of several characteristics of their visit and the degree of satisfaction with the experience for that characteristic." The characteristics showing the largest gap are tranquility, peace and quiet, and getting away from crowds.

The Preferred Alternative B advocates the plowing of the road from West Yellowstone to Old Faithful. The number one reason to visit Yellowstone as stated in Table 31 and Table 32 in Chapter III of the DEIS is to view scenery and observe scenic beauty. " Plowing the road from the West Entrance to Old Faithful would create berms of snow that would detract from scenery viewing opportunities." The snow berms would also create a tunnel effect possibly trapping wildlife on the road.

Air Quality

YNP is a Class I quality air shed. Air quality is legally addressed in the GYA under the Clean Air Act, the Organic Act of 1916, and NPS Management Policy. As documented below, the excessive pollution of two-stroke engines is clearly prohibited under each of these laws or policies. The use of two-stroke engines in national parks, in the form of snowmobiles, is extremely questionable.

According to National Park Service Policy 4:17, NPS Policy seeks to perpetuate the best possible air quality in parks "because of its critical importance to visitor enjoyment, human health, scenic vistas, and the preservation of natural systems and cultural resources." NPS Management Policies further states, "[In] cases of doubt as to the impacts of existing or potential air pollution on park resources, the Park Service will err on the side of protecting air quality and related values for future generations." "These policies require managers to assume an aggressive role in promoting and pursuing measures to safeguard air quality and related values from the adverse impacts of air pollution." (NPS, 1999)

The NPS is mandated through both its own 1916 Organic Act (16 U.S.C. 1), the Clean Air Act (42 U.S.C. 7401 et seq) and Executive Order 12088, as amended, to protect air quality in National Parks. This Executive Order requires the head of each executive agency to ensure that all necessary actions are taken for the prevention, control, and abatement of environmental pollution (at 1-101) to submit a plan for the control of environmental pollution to the OMB annually, and to "ensure that sufficient funds for compliance with applicable pollution control standards are requested in the agency budget." (Id at 1-501.)

Section 176 of the Clean Air Act states, "No department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve, any activity which does not conform to an [state] implementation plan... [T]he assurance of conformity to such a plan shall be an affirmative responsibility of the head of such department, agency or instrumentality." Specifically addressing the NPS, the Clean Air Act states "the NPS, as a federal land manager, has an affirmative responsibility to protect air quality related values, including visibility, from the adverse effects of air pollution in areas that are designated as Class I." There are 48 Class I areas that are part of the NPS. Congress intended that these areas be afforded the greatest degree of air quality protection and specified that only very small amounts of air quality deterioration from new or modified major stationary sources is permitted. One of the purposes of this "prevention of Significant Deterioration (PSD)" program is "to preserve, protect, and enhance the air quality in national parks." (42 U.S.C. 7401 et seq.) Additionally, any action taken by the NPS, a Federal entity, must conform to state plans to achieve and maintain national air quality standards.

Clearly, federal actions must not cause or contribute to new violations, increase the frequency or severity of existing violations, interfere with timely attainment of maintenance of any standard, delay emission reduction milestones, or contradict State Implementation Plan requirements.

Currently, there are no federal laws regulating snowmobile exhaust. The typical snowmobile uses a two-stroke engine that produces high emissions of carbon monoxide (CO), unburned hydrocarbons (UHC), particulate material and a variety of gases classified as "air toxics" such as formaldehyde, and VOCs such as benzene. Snowmobiles don't use any pollution control equipment. The emissions are significantly higher than present-day automobiles and can concentrate in areas having cold and stable air.

Exposure to air pollutants, such as those listed above, is associated with numerous effects on human health. Those effects range from impairment of visual perception, manual dexterity, learning ability, and performance of complex tasks to headaches, fatigue, respiratory failure, and even death. Health concerns that are most commonly raised within the Park are related to smoke and vehicle emissions. Over 1200 letters of complaint were received by YNP in 1993 and 1994 relating to issues of employee and visitor health and excessive snowmobile pollution.

Snowmobiles are exponentially more polluting than automobiles for several reasons:

1) Every stroke of the piston in a two-stroke engine is a power stroke. Within a fraction of a second, the exhaust is vented and new gas, oil and air are brought in. Because both the exhaust and intake port are open at the same time, 25-30% of the raw fuel and oil is wasted and enters the environment with the exhaust.

2) Snowmobiles dump unburned fuel into YNP, GTNP and JDRP snowpacks every winter. In YNP, snowmobiles dump more than 50,000 gallons of unburned fuel into the snowpack. This is the equivalent of 5 tanker trucks of fuel spilling their loads in the park each winter. (Sources: Montana Department of Environmental Quality, 220,000 gallons of fuel were sold for snowmobile use within the park in the winter of 1995; Environmental Protection Agency, two stroke engines emit 25-30% of fuel unburned out the tailpipe in exhaust.)

3) Snowmobiles impair the Parks' air quality. One snowmobile emits 225 times more carbon monoxide than an automobile. One snowmobile emits 1000 times more hydrocarbons than an automobile. (Sources: National Park Service, snowmobile numbers and duration of visit from West Yellowstone to Old Faithful; International Snowmobile Industry Association, emissions levels and horsepower; Environmental Protection Agency, load factor, automobile emissions levels) Recent US Environmental Protection Agency (EPA) data shows that new automobiles emit over 3,000 times fewer hydrocarbons and nearly 600 times less carbon monoxide than modern snowmobiles.

4) Snowmobiles damage visitor and employee health. The highest carbon monoxide levels in the nation were recorded at Yellowstone's West Entrance during winters in the 1990s. The Park Service must pump fresh air into entrance booths to curb employee headaches, dizziness, throat irritation and nausea. (Source: Montana Department of Environmental Quality; Environmental Protection Agency; National Park Service)

By allowing snowmobiles to continue use in the GYA under the Preferred Alternative B, the Park service puts at risk our Class I air shed. Mike Finley, YNP Superintendent, states in an article in the Jackson Hole News dated October 27, 1999, "Yellowstone's air must be kept clean." He goes on to say that, "We are a class one area, like wilderness. Snowmobiles are not allow in wilderness." He goes on to state in an opinion article he wrote for the Jackson Hole Guide on November 10, 1999 on why the information on the Air Resources Division of the National Park Services report is important, " The first reason involves human health. These new studies give us reason to wonder if park visitors' health may be affected by high levels of emissions during their trip into Yellowstone, not to mention the quality of experience from the visual effects and noise." He wrote, "These studies indicate that we are not meeting the intent of these laws." The laws in question are the 1916 Organic Act (16 U.S.C. 1), the Clean Air Act (42 U.S.C. 7401 et seq) and Executive Order 12088.

From a Sunday, November 14, 1999 editorial in the San Francisco Chronicle, "A weekend of snowmobiling creates more air pollution in the park than a year of automobile traffic. Some days at the west entrance, where snowmobilers congregate, the air is so befouled with exhaust that oxygen is pumped into the ranger booth to protect the health of park employees." In the DEIS it states, "…YNP and GTNP began to study snowmobile emissions and found that CO and particulate matter (PM) concentrations were high enough to cause health and air quality concerns." In some cases, 2-minute average CO concentrations were measured in ranges of 0.1 ppm to 110.0 ppm. The high concentrations have been shown to impair psychomotor functions. Park employees are being subjected to high concentration of CO and PM. Even snowmobilers riding in groups may also suffer effects of the emissions from snowmobiles. This is a definite health hazard as well as a polluting of our National Park. Not only is air quality being compromised, water quality is also in danger from discharge from two-stroke snowmobile engine. This was cited in a 1974 report by Adams and another 1974 report by Ferrin and Coltharp. Has the Park Service been negligent in protecting the GYA? Also, *if* pollutants affect humans, the Park Service must address the affect on wildlife.

Because of (1) increased snowmobile use, (2) the amount of harmful pollutants, and (3) because snowmobiles are unregulated, the Park Service must mitigate or eliminate impacts to air quality. Currently there exists no means to mitigate these effects. Fortunately, the means to eliminate them does exist. Snowcoaches currently used in the GYA use four-stroke engines providing oversnow access. This mode of access must replace that of 2-stroke motorized access. Converting winter recreational transportation in YNP and GTNP and the JDRP would accomplish the desired conditions the park service seeks in this planning process, those being air quality, noise reduction and reduction in vehicle numbers.

Current air quality degradations within the parks warrant strong action, which is not adequately reflected, in the preferred alternative B. There is no defensible rationale for not preferentially utilizing available four-stroke technology in national parks, and eliminating extremely polluting two-stroke modes of access.

Snowmobile Sound / Noise

In an editorial written in the Salt Lake City Tribune on Tuesday, November 16, 1999, it states, "Preserving a national park's pristine and quiet nature by banning snowmobiles is not a revolutionary idea; the park service already does it in Glacier and Yosemite. Given three decades of evidence of the disturbance these machines have caused, there would seem to be even more justification to ban them at Yellowstone. Natural Quiet, "An important part of the mission of the NPS is to preserve or restore the natural soundscapes associated with national parks. The natural soundscapes (also called natural quiet) are unimpaired sounds of nature, and are among the intrinsic elements that combine to form the environment of our natural parks." On the paragraph on Natural Quiet on page 126 of the DEIS, it states, "Natural sounds are slowly and inexorably disappearing."

Parks and wildernesses offer a variety of unique, pristine sounds not found in most urban or suburban environments. They also offer a complete absence of sounds that are found in such environments. Together, these two conditions provide a very special dimension to a park experience… Quiet itself, in the absence of any discernible source, especially man-made, is an important element of the feeling of solitude. Quiet also affords visitors an opportunity to hear faint or very distant sounds such as animal activity, waterfalls, etc. Such an experience provides an important perspective on the vastness of the environment in which the visitor is located, often beyond the visual boundaries determined by trees, terrain, and the like... In considering natural quiet as a resource, the ability to hear clearly the delicate and quieter intermittent sounds of nature, the ability to experience interludes of extreme quiet for their own sake, and the opportunity to do so for extended periods of time is what natural quiet is all about.

The preceding paragraph is from the conclusion of a 1995 National Park Service report on the effects of Aircraft overflights on the NPS. This report also refers, in section 3.3 of its Conclusion, to five important facts that are to be considered when dealing with natural quiet:
1) Natural quiet is a resource for preservation within the NPS mandate.
2) The human auditory system is an excellent mechanism for determining the presence or absence of natural quiet. No available electronic device can duplicate human hearing for identifying audible sounds produced by non-natural sources.
3) The difficulty of preserving natural quiet is directly related to how quiet it is
4) Humans are not always aware of sounds that are audible
5) Park settings can provide levels of natural quiet so quiet that there is no sound to be heard except that generated by the listener - the sounds of walking, breathing, heart pumping, and blood flowing.

The NPS Management Policies (chapter 4, page 17) says, "The National Park Service will strive to preserve the natural quiet and the natural sounds associated with the physical and biological resources of the parks (for example the sounds of the wind in the trees or of waves breaking on the shore, the howl of the wolf, or the call of the loon). Activities causing excessive or unnecessary unnatural sounds in and adjacent to parks... will be monitored and action will be taken to prevent or minimize unnatural sounds that adversely affect park resources or values or visitors' enjoyment of them."

Snowmobile use has led to inescapable noise throughout YNP, GTNP and JDRP. The effect of this noise is stress to winter-worn wildlife and, to other visitors, the loss of the stillness, solitude and natural quiet that they came to enjoy.

The Preferred Alternative B falls far short of the mark in attempting to mitigate the problems of noise in both YNP and GTNP and, if implemented, would appear to be in violation of the Park Services' own Management Policies as they apply towards noise. The selection of a 70dB level for sound seems to be quite arbitrary, is not "strict" in any sense of the word, and will not come close to satisfying the NPS Management Policies. The timelines in the preferred alternative are also far too long to adequately address the noise issue. The problem can and should be dealt with in a much more aggressive manner. Two to three years is more than adequate to implement changes. Ten years is far too excessive.

Only the plan outlined in *The Citizens' Solution* to YNP and GTNP Winter Use, with its reliance on mass-transit systems featuring quieter snow coaches, will effectively deal with the noise that has been allowed to spread throughout these parks.

Human Health and Safety

Human Health and Safety issues have been discussed above from inhalation of pollutants from two-cycle engine of snowmobiles and the possible infraction of air quality standards. Other issues addressed by the Preferred Alternative B should be addressed in any alternative, especially hours of travel allowed in the Parks. With snowcoach travel only under *The Citizens' Solution*, schedules should be published and adhered to. Daylight only travel would protect wildlife and add to human safety. This would also protect the park resources in enforcement, reservations at lodges and backcountry permits. We agree with most of the Human Health and Safety measures put forth by the Alternatives except for the CDST. *The Citizens' Solution* advocates closure of this trail in GTNP and JDRP. By closing the CDST, auto/snowmobile conflict will be resolved. *The Citizens' Solution* also advocates the closure of the East Entrance. This entrance is used by less then 3% of winter visitor. Because of the possible avalanche conditions and the need to use military explosives for avalanche control, a use not in keeping with the purpose of national parks, the Park Service should close the East Entrance. Finally, wildlife health and safety should be recognized in any alternative. I fully agree that backcountry travel should be limited to established trails and not be allowed into critical winter habitat. The Park Service will need to educate all winter visitors on health and safety issues for humans and wildlife.

Social and Economic Impacts

Social and Economic impacts are identified in the DEIS with the help of the cooperating agencies, the counties surrounding the GYA. The Park Service has recognized the impact the Winter Use Plan would have on the surrounding communities but through the Preferred Alternative B, have pleased none of the cooperating agencies. The surrounding counties are proposing a Revised Alternative E that would alleviate any social and economic impact to their communities. The Preferred Alternative would have a major impact on West Yellowstone because of the number of snowmobile concessions and the fact that they advertise themselves as the "Snowmobile Capitol of the World." The Jackson area would also be impacted because of the increased snowmobile traffic that may/will use the South Entrance to enter Yellowstone on a single user motorized vehicle. In the DEIS on page 89, it is estimated that the expenditures generated in the GYA by nonresidents visiting the parks in winter months is $60 million. With a total annual output of $12.7 billion in the GYA, the winter economy represents only 0.5%. This is a minor affect to the economy as a whole. It is understood that West Yellowstone's winter economy represent 20% of their annual revenue. They would be able to make up any shortfall with changing to cleaner burning snowcoaches.

The Citizens' Solution recognizes the social and economic impact on surrounding communities. With access still viable by snowcoach, the economic impact should be minor while the snowmobile outfitters either change to snowcoach providers or revamp their businesses to recreation outside of the national parks. This is already happening in West Yellowstone and Jackson through use of the surrounding national forest. However, this can have a negative impact to the surrounding public lands, these public lands users and wildlife. It should be addressed cooperatively and proactively by all the public lands managers in the GYA, not left without adequate planning as has snowmobile and visitor use in YNP, GTNP, and JDRP.

By allowing snowcoach travel into the YNP and the present auto restriction in GTNP, access for visitors are still available and affordable. As criteria for any plan, *The Citizens' Solution* meets those criteria.

Natural Resources

Finally, we request that the Park Service determine the winter visitor carrying capacity of the GYA to determine the social and economic impact on the parks in future years.

This winter carrying capacity is also needed to address Natural Resource management of the Parks. Please consider the following in respect to natural resources:

1) Protect natural resources for the benefit of all Americans and for future generations
2) Continue studies on impact of winter use to natural resources. Protect those natural resources when necessary with selected closure of areas if necessary.
3) Restrict non-motorized use in important winter range
4) Restrict oversnow motorized travel to snowcoaches that meet stringent air quality standards
5) Eliminate motorized use on Jackson Lake
6) Allow non-motorized travel only on groomed trials in frontcountry
7) Manage winter use to the benefit of wildlife and natural resources
8) Establish grounds for cooperating agency status.

In addition to emphasizing snow coach access, *The Citizens' Solution* will:

1) Require a study to determine the winter carrying capacity in YNP and GTNP so that the Park Service can strike a better balance between protection of park resources and providing visitors with a quality park experience

2) Limit off-trail backcountry use by skiers and snowshoers in places where wildlife need additional protection

3) Discontinue the Continental Divide Snowmobile Trail in GTNP

4) Close YNP's east entrance road where expensive avalanche control efforts involve military explosives that are not in keeping with the purpose of national parks

5) Encourage further research on the needs of wildlife wintering in YNP and GTNP

Thank you for the opportunity to comment on the Winter Use Plan DEIS. Please keep me informed on any plans affecting the GYA.

Sincerely,

John Spahr

John Spahr
1885 E. Limber Pine Road
Jackson, WY 83001
[redacted]

Page 1. Statements of support for The Citizens' Solution do not respond directly to information in the DEIS. That alternative most closely resembles alternative G in the DEIS. Support for a course of action goes to the decision to be made – and may be of interest to the decision maker but does not provide rationale that affects the DEIS analysis.
Page 1. All alternatives in the DEIS address the purpose and need for action to some degree. Alternative B addresses safety issues, affordable access, and concerns about impacts on sound and clean air. Criticism of alternative B as the preferred alternative goes to the decision to be made. At this juncture, the criticism is moot because the preferred alternative will change in the FEIS.
Page 1. Criticism of alternative B as the preferred alternative goes to the decision to be made. At this juncture, the criticism is moot because the preferred alternative will change in the FEIS. The effects of alternative B are disclosed in the DEIS, and that alternative or its various features remain as choices for the decision maker.
Page 2. Recreation carrying capacity determination would be performed under any alternative (DEIS page 25).
Page 2. Capacity determination is not mandated. Protection of resources and values for the enjoyment of future generations is the primary mission. Findings must be made regarding the extent, magnitude and duration of adverse impacts relative to the mission. Carrying capacities and subsequent use limitations may be a means to achieve a balance between recreation use and protection of resources. Carrying capacity determination is a highly complex task that will require a great deal of time to accomplish.
Page 2. Support for a course of action goes to the decision to be made – and may be of interest to the decision maker but does not provide rationale that affects the DEIS analysis. Alternative G in the DEIS provides a mass transit oversnow access option for the decision maker.
Page 2. Support for a course of action goes to the decision to be made – and may be of interest to the decision maker but does not provide rationale that affects the DEIS analysis. Alternatives D and E in the DEIS provide options for backcountry nonmotorized use limits in YNP. The preferred alternative in the FEIS will incorporate such features for both park units.
Pages 2-3. Statements of support for The Citizens' Solution do not respond directly to information in the DEIS. That alternative most closely resembles Alternative G in the DEIS. Support for a course of action goes to the decision to be made – and may be of interest to the decision maker but does not provide rationale that affects the DEIS analysis. See matrix that compares features of the Citizens' Solution with alternative features in the DEIS.
Page 3. NPS acknowledges the comment. Additional survey results are available for use in the FEIS. Determinants of winter use, or how various impact topics/effects are weighted, will fall to the decision maker and the rationale for the eventual decision.
Page 3. Our assessment indicates that there will not be a tunnel effect. Berms will be created, but for most of the distance they would not impede the view of scenery. These impacts are discussed on page 219 of the DEIS. Created berms will be laid back to allow wildlife to exit the road, as a provision of all alternatives in which road segments are plowed (DEIS page 25).
Pages 3-4. The purpose and need for action is predicated on NPS mandates, executive orders, regulations and policies, including those that relate to air quality.
Pages 4-5. Re: impacts of snowmobiles on air quality. The DEIS discloses the impacts of snowmobiles on air quality, beginning with the methods and assumptions section on page 164 and subsequently for each alternative. This information is updated in the FEIS using recently completed studies and modeling.
Page 7. The impacts on sound alluded to in this comment have been disclosed in the DEIS. Suggesting what the decision should or shouldn't be, or questioning the justification for designating the preferred alternative, is insufficient rationale for dismissing an alternative from the range to be considered.
Page 9. Recreation carrying capacity determination would be implemented under any alternative (DEIS page 25). Carrying capacity determination is a highly complex task that will require a great deal of time to accomplish.

RECEIVED
NOV 15 1999

Attention: Michael Finley

November 10, 1999

Dear Clifford Hawkes,

I am writing this letter in response to the Winter Use Plan and Alternative B of the DEIS for Yellowstone and Grand Teton National Parks.

I have lived in Yellowstone at Old Faithful, Grant, and Lake for six years and I am about to begin my fourth winter as a Bombardier Snowcoach Driver. In the winter I drive park roads on a regular basis and experience first hand a lot of the issues stemming from winter use.

I truly believe the plan to plow the road from West Yellowstone to Old Faithful is neither beneficial to the visitor or to the well being of the park. Plowing the road does not provide safer travel, in fact it could make travel more dangerous as sometimes maintaining the road for safe travel may be impossible. It also creates a dangerous situation for wildlife by building berms of snow that they may be unable to travel across. This is a hazard in the spring when roads are first plowed, Bison + elk become trapped on the road which is stressful enough - but becomes even worse when combined with traffic. Plowing the road does not improve the visitor experience; traveling through Yellowstone on snow-covered roads is a unique experience that should be preserved. Visitors packed onto buses with berms blocking their view and designated stopping areas would not make for a special Yellowstone experience.

I am not a fan of snowmobiles, but they do allow visitors to determine their own itinerary. I think stricter regulations could make snowmobile use considerably less detrimental to the park. Regulations such as limits on emissions and noise, and allowing only so many to enter the park per season or per day. I am concerned that plowing would only increase and concentrate snowmobile use in other areas of the park. By limiting snowmobile use, winter visitors could also make use of snowcoach tours. This is a great alternative. I drive a Bombardier snowcoach which carries 10 passengers (most van conversion snowcoaches carry 12-13 passengers). This is a great way to see the park, you are in a small group with a guide providing commentary. We make planned stops at major features but also have the flexibility to make additional stops along the route as requested. Because the group is small, it is easy for guests to feel comfortable asking questions. I have been able to go into great depth and have group discussions about a variety of topics concerning the park. [illegible] ~~groups~~ Guests get comfortable with each other and ask questions, [illegible] enabling me to personalize the tour to their particular interests. This greatly benefits the visitor in a few ways; they have a more enjoyable and personalized visit, as well it provides a great interpretive opportunity.

Another concern I have with plowing the West Yellowstone to Old Faithful route is the potential for increased visitation. Facilities in the park are already inadequate for the number

(1)

(2)

of winter visitors. In particular, at Old Faithful, the Visitor Center, warming hut, Snowlodge dining areas, and parking lots are already overcrowded. If the number of visitors greatly increases, how will they be accomodated? Removing garbage and waste in the winter is an issue as well. Not to mention the impact of increased visitation on wildlife and natural features.

I have a few other concerns about Alternative B:

* Why lengthen the winter season? Yellowstone needs a break from the heavy summer and winter visitation it receives. By closing the roads for about a month in the Fall and Spring, it gives the park (wildlife in particular) a break from so many visitors.
* I also don't understand the need to add more motorized and non-motorized groomed trails. This results in the need for more areas to be patrolled and maintained. There is already adequate access to main features. Yellowstone is a wilderness and should remain so as much as possible.
* Alternative B mentions limiting backcountry access in some areas to designated trails only - to protect geothermal areas and winter wildlife range. Looking at the map outlining these areas shows places that are clearly not geothermal or winter wildlife range (for example, South side of Grand Loop road at Old Faithful and Madison Plateau), yet visitors are limited to trails only. There are also areas limited to designated trail use only that receive so little use, is it necessary to restrict the very few who make the effort to reach these areas and explore the natural wonders they came to see (for example Haydn Valley and Heart Lake areas)? I also have concerns as to what a designated trail is? Many trails are not well marked with orange markers therefore making it difficult to remain on an exact trail. In the winter, even regularly used trails are broken and rebroken with many variations depending on who is doing the trail breaking.

Winter use in Yellowstone is a complex controversy. There are no easy answers and no plan will keep all interested parties happy. But, it is important to keep in perspective the true purpose of Yellowstone and its dual mission: "to preserve and protect" and "for the benefit and enjoyment of the people". I only hope a plan can be devised to keep both missions in balance. I have valid concerns and options outlined above, please consider my perspective in the decision making process.

Sincerely,
Melissa Stringham

Melissa Stringham
P.O. Box 61
YNP, WY 82190

[redacted]
Page 1. Comments in this letter are critical of alternative B. Attention to this alternative is a function of its designation in the DEIS as the preferred alternative. The preferred alternative will change in the FEIS. The impacts of alternative B are disclosed in the DEIS. It is the purpose of an EIS to disclose impacts; identification of impacts is not suitable rationale for changing or removing the alternative from the EIS.
Page 1. The potential impacts of alternative B in regard to visitor experience and safety are disclosed in the DEIS on pages 203 and 217. The impacts on ungulates are disclosed on pages 208-210. NPS maintains that the plowing of the West Yellowstone to Old Faithful road segments represents a safer situation than currently exists. Unregulated use by large numbers of snowmobiles, piloted in many instances by novice riders, and snowcoaches amid the presence of wildlife is more hazardous than controlled and scheduled mass-transit traffic using trained and experienced drivers. On road segments that are less traveled, or less occupied by wildlife, snowmobile use continues in alternative B – this is status quo in terms of visitor experience and safety. Impact on scenic viewing and other aspects of visitor experience are discussed on pages 219-221 in the DEIS.
Page 2. Concerns about how use in the park units might change as a result of alternative B are understandable. The impacts of redistributed use are discussed to a degree in the DEIS. The FEIS will provide a more quantified scenario of how use might change by alternative.
Page 2. NPS is aware of the positive aspects of snowcoach travel, and agrees that for many people oversnow mass-transit access is a wonderful experience.
Pages 2-3. The amount of use and its distribution under alternative B, from West Yellowstone to Old Faithful, would be more easily scheduled and controlled using mass transit systems. The DEIS illustrates that there is sufficient capability using such a system to replace the number of visitors who presently use this route and destination services via snowmobile.
Pages 3-4. Winter wildlife habitat, and how the alternatives relate to it using trail designations or closures, will be clarified in the FEIS.

Michael J. Yochim

815 Prospect Place Apt. A
Madison, WI 53703

Received
NOV 1 6 1999
DSC-RP

November 8, 1999

Clifford Hawkes, 12795 West Alameda Parkway, Lakewood, CO 80228

Dear Mr. Hawkes:

Following are my comments regarding the Winter Use Plan EIS for Yellowstone and Grand Teton National Parks and John D. Rockefeller Memorial Parkway.

In large part my comments reiterate the suggestions I gave to the National Park Service as part of my master's thesis, *The Development of Snowmobile Policy in Yellowstone National Park* (University of Montana, 1998). I have published two articles summarizing my work: "Snowplanes, Snowcoaches and Snowmobiles: The Decision to Allow Snowmobiles into Yellowstone National Park," *Annals of Wyoming* 70(3): 6-23, Summer 1998; and "The Development of Snowmobile Policy in Yellowstone National Park," *Yellowstone Science* 7(2): 2-10, Spring, 1999. I suggest you add these references to your bibliography, as they have important background information and perspective on the topic of Yellowstone's winter use.

In general, I support the preferred alternative/Alternative B, but with several major changes, as follows.

1) The NPS should not only plow the road from West Yellowstone to Old Faithful, but should also plow the road from Madison to Mammoth. There are several reasons for this:

   a) Plowing is less expensive than grooming oversnow roads, so this would save the federal government a significant amount of federal funds;

   b) Plowing all of the roads from Mammoth to Old Faithful would facilitate winter touring into the park from Mammoth Hot Springs. The preferred alternative as it stands would have visitors (and park employees) from Mammoth taking oversnow vehicles as far as Madison, thereupon transferring onto buses. This presents an awkward touring/travel situation.

   c) Plowing all the west-side roads would take the pressure off the space-limited Madison area to serve as a staging area. The Norris area would then be the logical staging area for oversnow travel to the Canyon/Lake/West Thumb area. Norris, with its large parking lot, would be a much better staging area than Madison.

d) Plowing all the west-side roads as indicated would be more consistent. If it is possible to plow to Old Faithful, which receives the heaviest snowfall on these west-side roads, then it should also be possible to plow from Madison to Mammoth, a stretch of road that receives generally less snow than Old Faithful. Blowing and drifting snow on Swan Lake Flats is not that much worse than it is on Fountain Flats, which the plan proposes to plow. Hence, conditions on the other west-side roads should permit effective plowing from Mammoth to Madison as well as West to Old Faithful.

2) The National Park Service should restrict travel on all newly-plowed roads (West Yellowstone to Old Faithful and Madison to Mammoth) to publicly-operated vehicles such as buses and vans. There are many, many reasons to keep these roads closed to private vehicles:

a) Once a door is opened to the public, it is very difficult to close—much more difficult than it was to open that door in the first place. Denali National Park administrators understood this concept when they decided to keep the main park there closed to private automobiles upon the completion of the state highway that now passes the entrance of the park. They made the decision to restrict summer traffic to buses, and have established a tradition of environmentally-preferable mass-transit travel. Yellowstone administrators are faced with a similar opportunity at this point: providing for winter visitation while keeping the door to private automobiles closed. Let's use the vision that Denali administrators used as we go about making these upcoming major decisions in Yellowstone—allow continued visitation without the automobile. In so doing, we'll set the same good example that Denali administrators have.

b) By restricting travel on these roads to public vehicles, the NPS can very easily institute carrying-capacity limits to the numbers of visitors (or vehicles) allowed in. All such touring vehicles would either be owned by the park concessionaire (AmFac Parks & Resorts) or by commercial-use-license operators. Hence, with government control over all vehicles used in the park in the winter, the NPS could keep effective control of their numbers. Such a system would more easily facilitate adaptive management changes as well.

c) Tours on such public vehicles would be much more affordable to the general public than tours on either snowcoaches or snowmobiles are today. Based upon AmFac's pricing structure for winter snowcoach tours and summer bus tours, the bus tours cost only about 1/3 as much as snowcoach tours, and only about 1/5 the cost of a snowmobile rental. Even given potentially higher operating costs in winter, winter bus tours would still likely cost only half the amount of a snowcoach tour or about 25% that of a snowmobile rental. In other words, while the cost to visit Old Faithful would, under this option, be more than driving one's personal vehicle into the park, it would still be significantly less than the current system allows.

d) Only drivers experienced in winter driving would be driving in the park. Many current winter visitors are from southern, snow-free states, and are inexperienced in winter driving. Allowing them into Yellowstone in their own vehicles promises no end of traffic accidents. A system that uses only public transportation would presumably use drivers who are experienced in winter driving. Such a system, then, will have obvious safety benefits. Additionally, plowed roads are likely to have wildlife on them at times, and probably in somewhat predictable places. It follows that another safety benefit of public transportation's experienced drivers is that they will come to learn where these areas are, and will slow down or exercise caution as necessary.

e) Forcing all visitors to take public transportation will also effectively force them to be educated about the park (and the benefits of mass transit). Since they would be a captive audience inside the vehicle, the park can use knowledgeable driver-guides to give the visitors an interpretive tour of the park while conducting the visitor to their destination. In this manner, the park can cast its preservation message to a wider audience.

f) By forcing all visitors to take public transit, the NPS would open a new economic door for gateway communities that would compensate (at least in part) for the closure of the other (reduction in snowmobile rentals). In this way, the NPS could ease the economic transition to an economy less dependent on the rental of snowmobiles.

g) Public vehicles would create much less air and noise pollution than either existing snowmobiles or snowcoaches. Snowmobile air and noise pollution is well-known, and even large buses would greatly reduce both. Additionally, buses and vans would reduce fuel consumption over snowmobiles and snowcoaches. My personal experience as a snowcoach driver and a bus driver in Yellowstone tells me that snowcoaches average only about 2 miles per gallon, while buses average 5-6 miles per gallon and vans even more. Hence, restricting travel to buses and vans would not only realize the greatest reduction in air and noise pollution, but would also accomplish the greatest reduction in fuel consumption.

h) Buses and vans, by virtue of being taller than most private vehicles, would enable their passengers to sit above the roadside berms of snow created by plowing, and in that way more easily view park scenery than automobile passengers would be able to. The thought that such berms would restrict the visitor's view of the park has been used since the 1960's, and has never been tested. It's a tired argument, and should not be used as a reason against plowing. In fact, countering this argument is the fact that the NPS currently plows U.S. Highway 191, which receives as much snow as the Old Faithful area in the Divide Lake area, yet berms of snow do not obstruct one's view off the roadbed there.

3) The National Park Service should close Sylvan Pass in the winter. There are two obvious reasons for this:

   a) To keep this route open in winter, the NPS must not only groom it regularly but must also staff the East Entrance and discharge potential avalanches at Sylvan Pass. Yet, this is the least-traveled route in the park. The small number of snowmobiles traveling this route in winter just do not justify the great expense to keep it open. The NPS in this manner could save much-needed funds.

   b) Sylvan Pass is dangerous. Need I say more than to mention the death of Bob Mahn a few years ago?

4) Snowfall on the remaining road system (Norris to West Thumb via Lake and South Gate to Old Faithful) is heavy and accumulates to great depths. Hence, plowing these roads is not feasible, and travel on them should remain over-snow. However, the National Park Service should restrict travel on them to snowcoaches, which would eliminate snowmobiles from the park altogether. There are many reasons for this:

   a) Snowcoaches, like buses, are significantly quieter than snowmobiles are. Eliminating snowmobiles altogether would go a long way toward restoring the park's awesome winter silence. In my five winters in Yellowstone, I skied to many places deep in Yellowstone's backcountry (some of them as far as nine miles from the nearest road), *and have not been able to escape the noise of snowmobiles.* I have personally heard them from Shoshone Geyser Basin, Cowan Meadows, Heart Lake, Mallard Lake, Summit Lake, and Mt. Washburn. Restoring the park's winter quiet is a must, and *cannot* be accomplished without eliminating snowmobiles *entirely.* While it should be possible to design quieter snowmobiles, snowmobile manufacturers have been reluctant to do so, probably because most snowmobile buyers want more powerful machines, which are even noisier than present machines. Another reason for their reluctance is that snowmobile sales in the Yellowstone area are only about 1% of their total sales. The other 99% expresses little if any demand for quieter machines. Hence, asking manufacturers to voluntarily design quieter machines will not accomplish anything; snowmobiles must be eliminated entirely to restore quiet.

   b) Again, the benefits of mass transportation would be realized under this suggestion: snowcoaches are cleaner and quieter, more fuel-efficient/less resource consuming, and more easily regulated numerically.

   c) Snowcoaches have become a part of the historic winter visitor experience in Yellowstone. Snowcoaches arrived on Yellowstone's winter scene at least eight years before snowmobiles, and are rarer than snowmobiles. Hence, snowcoaches are arguably more historic than snowmobiles. This option allows for their continued use in the park.

5) Affordable lodging at Old Faithful needs to be made available to the public. The NPS is promoting the preferred alternative partly because it will make a winter visit to the park more affordable to most Americans, by reducing the cost of transportation. This is laudable, but it is hypocritical to reduce the cost of transportation while at the same time pricing most Americans out of overnight accommodations at Old Faithful. This means that Old Faithful in winter is still effectively the playground of the rich. It would seem that the Park Service's right hand does not know what its left hand is doing. Be consistent and make the winter visit truly affordable, perhaps by dropping the Western Cabin price by 50%.

6) The National Park Service needs to reexamine its view on snowmobile use in any national park. Since snowmobiles were developed in the 1960's and 70's, the NPS has viewed them not as the recreational vehicle that they are but rather as a mode of transportation as natural in winter as automobiles are in the summer. While this may sound logical, it is not the perception that most users of snowmobiles have, whether they are first-time or repeat users. Most first-time users view them as novelties. This impression then dominates their experience of the park—instead of the park's resources. Other first-time users and many repeat users view these machines as recreational vehicles or toys, in the same class as jet-skis, four-wheelers, and road bikes. No matter what the NPS thinks, the nature of snowmobiles dictates otherwise: the public sees them as recreational novelties. As such, the experience of snowmobiling comes to dominate the winter scene, rather than experiencing Yellowstone's fabulous resources.

Parts of Alternative B that I especially like include the following:

1) The continued research of winter and winter use on the park's wildlife. Wildlife concerns have been a nagging problem for decades; let's find out the truth!

2) In line with wildlife research, the adaptive management aspect of Alt. B. Having the flexibility to change the operation is important if we do discover that winter has unacceptable impacts on the park's wildlife.

3) The cutting of regular "escape routes" for the park's wildlife through the roadside berms, so that the animals may get off the roads.

4) The ban on late-night travel. Night-time conditions are especially dangerous, particularly with animals bedding down on roadways as they do.

Finally, I must say a word about the "Citizen's Alternative" put forth by the various environmental groups of the area. As you know, the primary element of their plan is to restrict all inner park travel to snowcoaches only. After giving this idea serious, extended thought as I wrote my thesis, I decided against it because of these two reasons:

1) Snowcoaches are a financial disaster for most companies who use them. My experience with AmFac as a snowcoach driver confirmed this time and again: snowcoach maintenance and upkeep sucked all the profit out of the winter venture. While there is one business that does turn a profit on its snowcoach operation (the Alpenguides), I don't think there are many business owners willing to enter into a touring operation dependent on snowcoaches, and knowing their disadvantages. By contrast, many businesses already own buses and vans for summer use in the Yellowstone area; using such vehicles year-round would only help these businesses justify their vehicle costs more, and make such businesses all the more profitable.

2) Even if snowcoaches were profitable, the price of touring on them is still extremely expensive, more than twice that of a bus ticket for a tour of a similar length (as based again on AmFac's summer and winter prices). The average American cannot afford such tickets, meaning that the winter visit would still be something only the wealthy could afford. Neither snowcoaches nor snowmobiles are ever going to make that visit affordable to everyone. *The only way to make a winter visit affordable to the average "Joe" is by plowing the road to Old Faithful.* To me, this is one of the critical issues, along with air quality, noise reduction, and quality of the touring experience.

Thanks for the opportunity to comment. I hope you seriously consider my suggestions, and implement them.

Sincerely,

Michael J Yochim

Michael J. Yochim

☆ U.S. GOVERNMENT PRINTING OFFICE: 2000 — 575-805 / M9469 Region No. 8

MICHAEL J. YOCHIM
Page 1. Re: Incorporation of Yochim publications as literature to be cited. NPS will review the information and incorporate it as necessary.
Pages 1-5. Commenter presents variations on alternative B, and reasons for the variations. Since an alternative selection and the rationale for it are reserved for the decision to be made, most of this subject matter cannot be responded to. Also, since the preferred alternative will change in the FEIS, the context for the comments no longer exists. Alternative B and its various features remain as choices for the decision maker. Re: Plow entire north and west side of park, for logistic ease, visitor access, and cost reduction. Plowing the road from Mammoth to Norris and then south to Madison was not considered to be a feasible alternative for several reasons. These sections of road receive a good deal more snow and wind during the winter season than other road sections proposed for plowing. Park maintenance staff are concerned that during the deep winter, the narrow curvy road template coupled with high cross winds would prohibit any degree of certainty in keeping the road open. Plowing these road sections during the late winter season as suggested in alternative C was considered to be the only feasible option for plowing from Mammoth to Madison. In agreement with the commenter, the analysis presented for both alternatives C and B (see pages 219-222 and 240 –242) suggest that adverse effects would occur under these alternatives because of the complex travel logistics required by both park visitors and employees. Re: Restrict plowed roads to public vehicles only. Alternative B does limit use to concessions or NPS managed access on the plowed road from West Yellowstone to Old Faithful. A very limited number of private vehicles would be accepted on the basis of reservations taken. Re: Closing Sylvan Pass. This feature is present in alternative D, and remains available for selection by the decision maker. Re: Close remainder of YNP to snowmobiles. Alternative G limits motorized oversnow access in all three park units to snowcoach only. This feature is available for selection by the decision maker. Re: Affordable housing at Old Faithful. Commenter has a point. However, there remains a distinction between access and lodging unfortunately. The lodging portion of the experience is in the purview of concessions, not winter use access and recreation. Re: Snowmobile access. This comment goes to the purpose and need for action. Snowcoach only access is a choice available to the decision maker, in alternative G.
Pages 5-6. Re: Non-support for The Citizens' Solution. Insofar as it resembles DEIS alternative G, is a comment going to the decision to be made. NPS acknowledges the expense of snowcoaches, as an affordability issue similar to the cost of lodging in the park interior. As with all alternatives, and their features, there are down-sides as well as up-sides. The Park Service's chief concern is to decide on the means whereby the public can enjoy the parks during the winter while protecting park values and resources. The preferred alternative in the FEIS will reflect this thinking.

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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